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The Impact of HR Practices on Patient Care and Rehabilitation Outcomes: A Case Study of Physical Referral Rehabilitation Center (PRRC), Mana Camp, Raipur, Chhattisgarh, India

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Abstract

This mixed-method case study investigates how human resource (HR) practices affect patient rehabilitation and care outcomes in a rehabilitation center run by the Indian government. By combining quantitative data (staff and patient records), surveys, and qualitative information (interviews, field observations), the research identifies essential gaps in HR undermining service quality. Findings show critical workforce issues: 70% of personnel indicate heavy workloads as a result of under-staffing, 25% annual staff turnover (attributable to burnout and few career opportunities), and just 40% receive formal training, leading to obsolescent rehabilitation practices. These HR weaknesses relate to less than optimal patient outcomes 65% of patients lack the ability to pay for assistive devices (e.g., prostheses that cost 50,000–100,000 INR), while lack of a social work department denies psychosocial needs. On the other hand, patients with well-supported families record 70% higher recovery rates, which stress the significance of holistic treatment. Theoretical frameworks Resource-Based View (RBV) and Human Capital Theory (HCT) emphasize investing in organizational resources and staff training. Suggestions are: competitive hiring and AI-based training to fill skill gaps mental health initiatives to prevent staff burnout, creating a social work department for psychosocial support, policy interventions like enhanced subsidies for assistive devices and infrastructure development.

This study fills a critical gap in healthcare HRM literature by showing how workforce management cascades into rehabilitation quality, especially within low-resource environments. Empirical findings provide pragmatic solutions for PRRC and other such centers to strike a balance between caregiver support and patient-centered care, promoting equitable access to rehabilitation services.

Keywords: Human Resource Management, Rehabilitation Outcomes, Patient Care, Workforce Challenges, India

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1. Introduction

The level of healthcare service quality and rehabilitation performance is greatly determined by human resource (HR) practices, and therefore HR management (HRM) is a crucial element for good patient care. In hospitals, HR practices of recruitment, training, performance appraisal, and employee motivation are key to improving workforce performance and service provision (Kabene et al., 2006). Quality HRM practices enhance the competency of staff, patients' satisfaction, and rehabilitation performance, especially within specialized facilities such as rehabilitation facilities (McGilton et al., 2016). The healthcare industry, particularly rehabilitation centers, is plagued by significant challenges including workforce shortages, skill gaps, and inconsistent HR policies all of which have a major impact on patient recovery and service effectiveness. Strategic HR practices like strategic hiring, continuous training, formal performance appraisal, and employee motivation are keys to making healthcare staff provide quality care (Ebrahim et al., 2020). On the other hand, inefficient HRM in rehabilitation centers causes burnout, decreased job satisfaction, and below-par patient outcomes.

The Physical Referral Rehabilitation Center (PRRC) in Raipur, Chhattisgarh, is a case in point. Key HRM problems such as staff shortages (70% of staff experience unsustainable workloads), excessive turnover (25% per annum), and poor training (only 40% of coverage) are empirically associated with poor patient outcomes (Kabene et al., 2006; Ebrahim et al., 2020). Adding to these issues, 65% of patients are unable to pay for prosthetics, and the absence of a social work department means psychosocial needs go unmet. Although the known function of HRM in healthcare is established, its influence on rehabilitation centers within low-resource Indian settings is underexplored.

This study addresses three key gaps:

1. Theoretical: Not many research studies use Human Capital Theory (HCT) or Resource-Based View (RBV) on rehabilitation facilities such as PRRC (Becker, 1964; Barney, 1991).

2. Psychosocial Support: As psychosocial treatment enhances recovery (Parker, 2017), its embedding in HR policies is not tested, as witnessed in PRRC's lack of a social work department.

3. Financial barriers: Scalable solutions to cost-related barriers to rehabilitation (e.g., prohibitively expensive prosthetics) do not exist in the literature, disproportionately impacting vulnerable populations.

1.1 Statement of the Problem

The Physical Referral Rehabilitation Center (PRRC) struggles with severe HR issues compromising quality patient care and rehabilitation outcomes. Deficits in staff personnel (70% claim to have too much work), high yearly turnover (25%), and low levels of training (only 40%

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are covered) directly affect service delivery. Adding insult to injury, 65% of patients lack the means to afford critical assistive devices, while the lack of a social work department ensures psychosocial needs are unmet. In spite of the established significance of HRM in healthcare, there are few studies focusing on such dynamics in low-resource rehabilitation facilities such as PRRC. This research explores the impact of HR deficiencies on rehabilitation outcomes, while filling three important gaps: (1) sparse application of HR theories (HCT/RBV) to Indian rehab centers, (2) non-integration of psychosocial support into HR policies, and (3) lack of scalable interventions for financial barriers to rehabilitation.

Gaps in Existing Research

While HRM's role in hospitals is well-documented (Kabene et al., 2006), three critical gaps persist:

1. Limited studies on HRM in low-resource rehabilitation centers, especially in India (Ebrahim et al., 2020).

2. No empirical tests of how Human Capital Theory (HCT) and Resource-Based View (RBV) apply to rehabilitation HRM.

3. Scalable solutions for financial/psychosocial barriers are absent in literature, though they disproportionately affect marginalized patients (Cutler, 2018).

1.2 Research Aim and Objectives

This research examines the influence of HR practices on patient care and rehabilitation outcomes at PRRC via five objectives:

1. Investigate relationships between HR practices (staff recruitment, training, workload management) and care quality.

2. Evaluate the effects of staff burnout, turnover, and training gaps on service delivery.

3. Compare patient support systems (psychosocial, financial, and family-based).

4. Determine systemic barriers (financial constraints, infrastructure deficits).

5. Suggest practical HR and policy measures.

1.3 Research Questions

1. What is the relationship between HR practices (e.g., recruitment, training, workload management) and patient care quality at PRRC?

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2. How does staff burnout, turnover, and poor training influence the delivery of rehabilitation services at PRRC?

3. In what ways do psychosocial, economic, and family-based support systems affect patients' rehabilitation outcomes at PRRC?

4. What systemic barriers (e.g., financial constraints, infrastructure needs, lack of social work support) hinder effective rehabilitation at PRRC?

5. What HR and policy measures can enhance staff well-being and patient-centered rehabilitation treatment at PRRC?

1.4 Significance of the Study

This study makes a contribution on various fronts. It is theoretically more encompassing, bringing together the Human Capital Theory (HCT) and Resource-Based View (RBV) to show how strategic human resource investments like training and wellness initiatives can improve rehabilitation service quality. By connecting HR development with enhanced care outcomes, the research creates a strong conceptual framework for knowledge on HRM in healthcare delivery.

In practice, the study provides evidence-based interventions to solve urgent problems at the Physical Referral Rehabilitation Center (PRRC), such as a 60% rate of staff burnout. AI-based training modules and extensive mental health programs are recommended to enhance staff capacity, resilience, and performance.

Policy-wise, the research recommends systemic changes such as government subsidies, the implementation of national HR standards for rehabilitation centers, and incorporating psychosocial support services. These are meant to synchronize local practices with international models, more so the United Nations Convention on the Rights of Persons with Disabilities (2006), to facilitate equity and inclusivity in rehabilitation services.

1.5 Scope and Limitations of the Study

Scope

This research investigates the effect of human resource (HR) practices namely recruitment, training, and management of workload on patient care quality and rehabilitation outcomes at the Physical Referral Rehabilitation Center (PRRC) in Raipur, India. It considers three primary areas. In the first place, it probes staff opinions using questionnaires and interviews of healthcare workers regarding how HR practices influence their performance and job satisfaction. Second, it takes into account patient experience through case studies and recovery rates to evaluate the quality of care and rehabilitation progress. Third, it explores system barriers like financial limitations,

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infrastructural deficits, and the lack of psychosocial support, which could impact both staff performance and patient outcomes.

Limitations

The research has a number of limitations. First, the single-center nature of the research is such that the results may not be extrapolated to private or urban rehabilitation centers, since context and resource availability at PRRC can be very different. Second, basing the information on staff and patient self-reporting allows for response bias, such as the underreporting of problems like burnout or dissatisfaction. Third, because of resource limitations, such as limited sample size and time, the study was unable to carry out a longitudinal analysis to monitor changes across time. To counteract these limitations, the study recommendations focus on scalable solutions that can be scaled up to other low-resource rehabilitation settings.

1.6 Definitions of Key Concepts

Definitions of Key Concepts

1. Human Resource Management (HRM)

"A strategic approach to managing an organization's workforce to enhance performance and achieve goals" (Armstrong, 2006)

2. Rehabilitation

"A set of interventions designed to optimize functioning and reduce disability in individuals with health conditions" (WHO, 2021)

3. Patient Care Quality

"The extent to which health care services enhance desired health outcomes and meet evidence-based standards" (Institute of Medicine, 2001)

4. Burnout of Staff

"A work-related syndrome of emotional exhaustion, depersonalization, and decreased personal accomplishment" (Schaufeli & Bakker, 2004)

5. Psychosocial Support

"Interventions to address psychological and social needs to improve coping and community reintegration" (Parker, 2017)

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2. Literature Review

2.1 HR Practices in Healthcare Rehabilitation

Effective Human Resource Management (HRM) is essential in rehabilitation centers, where the skills and performance of specialized personnel like physiotherapists and occupational therapists have a direct impact on patient recovery outcomes. Research identifies some HR-related issues at the Physical Referral Rehabilitation Center (PRRC). For example, only 40% of PRRC staff are trained annually, leading to the continued application of outdated methods of rehabilitation (Ebrahim et al., 2020). This is in keeping with worldwide research evidence, where skill deficiencies have been linked with 20% reduced rates of patient recovery (Kabene et al., 2006). In addition, high levels of reported workload by 70% of the PRRC personnel and an annual staff turnover of 25% also add to care discrepancies, a typical situation in low-resource health facilities (WHO, 2020). There is another gap in the absence of performance-based incentives; hospitals that link employee evaluations to patient outcomes have shown 15% improved recovery rates (Houri & Beydoun, 2024), but this practice is not yet implemented at PRRC.

Theoretically, these results are underpinned by Human Capital Theory (Becker, 1964), which stresses the importance of training and skill acquisition as key investments for enhancing rehabilitation quality and organizational performance.

2.2 Patient Outcomes

Apart from HRM, patient outcomes within PRRC are determined by a variety of systemic and context factors. Psychosocial support, for instance, is important to patient recovery and adherence. Facilities that have social workers on staff have 30% improved patient compliance (Parker, 2017), but PRRC does not have a social work department, and emotional and psychological needs are not being met, as seen in Case Study 1. Financial accessibility is also a major issue 65% of PRRC patients cannot afford prosthetics, which range from 50,000 to 100,000 INR. Subsidies provided by government cover less than 10% of such expenditures, supporting inequalities in rehabilitation utilization (Cutler, 2018).

Moreover, family involvement has been found to decidedly improve recovery outcomes. Patients with strong family support like a 17-year-old in Case Study 2 have up to 70% higher recovery rates, supporting family-centered care models (Rosland et al., 2018).

Theoretically, the Resource-Based View (Barney, 1991) situates resources such as psychosocial support services and financial support mechanisms as strategic organizational assets. Lack of these or their underuse is a lost opportunity for enhancing patient outcomes and enhancing the overall service provision of the center.

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Synthesis Table: Key Studies & PRRC Alignment

Theme	Global Evidence	PRRC's Context	Citation
Staff Training	Yearly training improves recovery by 25%	Only 40% staff trained annually	(Noe et al., 2017)
Burnout	60% burnout → 30% higher errors	60% staff report burnout symptoms	(Shanafelt et al., 2017)
Financial Barriers	50% cost-coverage needed for adherence	65% patients cannot afford prosthetics	(Cutler, 2018)

2.3 Theoretical Framework

Combining Human Capital Theory (HCT) and Resource-Based View (RBV) in Rehabilitation HRM

This study adopts Human Capital Theory (HCT) and the Resource-Based View (RBV) as complementary models to understand how HR practices affect rehabilitation outcomes at the Physical Referral Rehabilitation Center (PRRC), Mana Camp, Raipur.

1. Human Capital Theory (HCT)

Fundamental Assumption:

Becker (1964) believes that investing in the skills and knowledge of employees generates long-term organizational returns.

Application to PRRC:

Training as Investment: PRRC's limited training scope (only 40% trained staff per annum) supports HCT's thesis that human capital underinvestment means lower service quality. Research indicates that regular training improves gait recovery by 25% (Noe et al., 2017).

Burnout as Depreciation: With burnout reported among 60% of staff, PRRC showcases HCT's theory of human capital depreciation and its negative implications on patient care (Shanafelt et al., 2017).

Key Proposition

HR practices with emphasis on staff training and wellness (HCT) will improve rehabilitation quality.

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2. Resource-Based View (RBV)

Core Premise:

Barney (1991) asserts that organizational competitive superiority arises from exclusive, valuable, and imitable internal resources.

Application to PRRC:

Psychosocial Support as a Strategic Resource: PRRC does not have a social work department, an absence defined by RBV as a lack of strategic resource. This absence leads to neglected psychosocial needs of patients (Parker, 2017).

Financial Accessibility: With 65% of patients not being able to pay for prosthetics, PRRC's failure to supply basic assistive devices indicates a significant RBV deficit, compromising its ability to leverage material inputs into recovery-related processes.

Key Proposition:

Rehabilitation facilities that have strong HR and material resources (RBV) have improved patient outcomes.

2.4 Integrated HCT-RBV Framework

By mixing HCT and RBV, the research offers a synergistic model for understanding HRM's role in rehabilitation:

Conceptual Model:

[HR Practices (HCT)]

↓

[Staff Competency + Well-being] → [Patient Care Quality]

↑

[Organizational Resources (RBV)]

Interpretation:

HCT: Individual and patient performance improve through staff well-being and training.

RBV: Access to distinctive internal resources (e.g., social workers, prosthetic subsidies) enables comprehensive rehabilitation.

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Combined Impact: Simultaneous emphasis on human and organizational capital speeds up recovery results (e.g., 70% recovery rate with strong professional and family support).

Empirical Support:

PRRC illustrates a 25% quicker gait recovery when patients are treated by trained therapists, validating the HCT model (see Dissertation Table 5.3).

Case Study 1 identifies emotional distress among patients that is associated with the lack of psychosocial support—a blatant RBV deficit.

2.5 Review of Related Literature

This section integrates previous research on Human Resource (HR) practices in healthcare rehabilitation with an emphasis on three key dimensions that reflect the challenges of the Physical Referral Rehabilitation Center (PRRC): (1) Workforce Management, (2) Barriers to Patient-Centered Care, and (3) Theoretical Applications in Low-Resource Settings.

1. Workforce Management in Rehabilitation Centers

Staffing Shortages and Burnout

World evidence suggests low-income countries have grave shortages in staff at their rehabilitation centers. A 40% shortage in specialists has resulted in rehabilitation services reported by the World Health Organization (WHO, 2020), causing a buildup of cases and stress. Similarly, the same shortage appears in PRRC as 70% of workers complain of unsustainable workload and 25% of an annual staff turnover rate fueled predominantly by emotional exhaustion (Shanafelt et al., 2017).

Training Deficits

Training gaps are still a central HR issue. At PRRC, only 40% of employees are given yearly training, in line with patterns seen at comparable Indian rehab centers (Ebrahim et al., 2020). Comparative statistics show the effect of training coverage on outcomes of recovery:

Context	Training Coverage	Impact on Recovery Rates
PRRC (This Study)	40%	25% slower gait recovery
US Rehab Centers	85%	15% faster recovery (Noe et al., 2017)

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Performance Management Gaps

Performance reviews at PRRC are unevenly implemented and viewed as ineffective. Although 50% of employees indicate that they have performance reviews, only 30% find them significant. Malik et al. (2024) contend that unstructured appraisals can reduce staff motivation by as much as 40%, compromising performance and morale.

2. Barriers to Patient-Centered Care Financial Accessibility

Economic barriers significantly restrict patient access to vital services at PRRC. Sixty-five percent of patients are unable to pay for prosthetic devices, which range from ₹50,000 to ₹100,000. Compared to only 35% of patients in Thai rehabilitation centers (Athamneh, 2024), Brazil subsidizes 50–70% of prosthetic expenses (Cutler, 2018). Government support in PRRC pays for less than 10%, reinforcing inequities.

Psychosocial Support

The lack of a social work department at PRRC means important emotional and psychosocial needs are not addressed. Parker (2017) discovered that treatment centers with counseling services have 30% increased treatment compliance and 50% decreased patient dropout rates, suggesting the value of integrated support systems.

Family Involvement

Family involvement strongly influences recovery outcomes. Case studies indicate that supported patients recover more rapidly:

Support Level	Avg. Recovery Time	Study
High	8 weeks	Rosland et al. (2018)
Low	14 weeks	PRRC Case Study 1

These findings reinforce the need for a family-centered model of care.

3. Theoretical Applications in Low-Resource Settings

Human Capital Theory (HCT)

Becker's (1964) HCT is a valuable analytical tool to understand PRRC's operational issues. Staff development underinvestment creates a training gap of 40%, impacting directly on care quality. Burnout among 60% of staff indicates human capital depreciation that further reduces service delivery capability.

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Resource-Based View (RBV)

Barney's (1991) RBV highlights the strategic significance of non-substitutable resources. The absence of a social work department and financial support mechanisms in PRRC is a serious competitive handicap. These missing or unused resources detract from patient and institutional performance.

Integrated Model

A combined HCT–RBV approach offers a more holistic understanding of rehabilitation success:

HR Inputs (Training) → Staff Competency → Patient Outcomes

↑

Organizational Resources (Funding, Social Workers)

This model underscores the interdependence between skilled human resources and organizational capacity in improving rehabilitation outcomes.

2.6 Critical Gaps Identified

Contextual Studies

Localized studies on HRM within Indian rehabilitation environments are rare. Ebrahim et al. (2020) is among the only studies examining these dynamics.

Intervention Research

Scalable intervention evidence is limited. It is promising in areas such as AI-based training for low-budget centers (Nguyen et al., 2021) and psychosocial program implementation (Parker, 2017).

Policy Integration

There is still a gap between national disability law—e.g., the Rights of Persons with Disabilities Act (2016)—and practice in HRM. Bridging this gap calls for integrated policy implementation and resource distribution attuned to the rehabilitation industry.

3. Research Methodology

This research utilizes a qualitative case study design to investigate the impact of Human Resource (HR) practices on patient care at the Physical Referral Rehabilitation Center (PRRC) based on

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observational and narrative approaches, as opposed to statistical methods. This was done to facilitate an in-depth, contextual examination of the facility's HR systems and rehabilitation processes.

3.1 Research Design

A descriptive case study design, as suggested by Yin (2018), was used to present a rich, in-depth analysis of HR dynamics and patient care practices within PRRC. Data triangulation using three complementary sources of data, namely field observations, staff and patient interviews, and document analysis, was employed in the study. The methodological design was chosen due to its potential to provide rich contextual information regarding the interactions between HR practices and rehabilitation outcomes, particularly in the small-scale, practice-oriented environment of PRRC (Stake, 1995).

3.2 Data Collection

The process of data collection included three principal parts: field observation, interview, and review of documents.

A. Field Observations

Daily structured observation sessions were carried out for four weeks. The observations targeted the quality of staff-patient interactions, the allocation of workload among staff, and the activity flow during rehabilitation sessions. Observational data were documented using detailed field note templates by Emerson et al. (2011), enabling consistent documentation of findings across various days and situations.

B. Interviews

25 people were interviewed in total, across three groups. Ten clinical workers were interviewed with a semi-structured approach to address themes including training sufficiency and burnout. Five administrators were interviewed with structured interviews about HR policy and budget challenges. Ten patients also took part in narrative interviews to provide individual accounts of care quality and rehabilitation challenges.

Participant Group	Sample	Method	Focus
Clinical staff	10	Semi-structured	Training adequacy, burnout
Administrators	5	Structured	HR policies, funding
Patients	10	Narrative	Care experiences, barriers

This variety in participant groups enabled the capture of multiple perspectives on HR and care delivery at PRRC.

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C. Document Reviews

The document analysis included a review of internal HR documents such as training protocols, job descriptions, and staff evaluations. Additionally, de-identified patient records were examined to assess progress notes and rehabilitation outcomes. These documents provided institutional context and helped corroborate themes emerging from observations and interviews.

3.3 Data Interpretation

Two complementary strategies guided the analysis process. First, Pattern Matching (Yin, 2018) was used to compare observed practices with theoretical expectations drawn from Human Capital Theory (HCT) and the Resource-Based View (RBV). For example, HCT was applied to analyze the impact of training frequency on staff performance, while RBV was used to evaluate how resource availability influenced patient recovery outcomes.

Second, Thematic Analysis (Braun & Clarke, 2006) was employed to systematically identify and organize recurring patterns. Data were manually coded to highlight key HR issues such as "workload" and "turnover," and patient-related concerns like "device cost" and "family involvement." These codes were then grouped into broader themes. For instance, the theme *Staff Burnout Consequences* emerged with sub-themes including *Reduced Patient Interaction Time* and *Increased Protocol Deviations*, supported by evidence from field notes (pp. 12–14) and interview quotes (Staff #3, #7).

Quality Assurance

To ensure the rigor and trustworthiness of the study, Lincoln and Guba's (1985) criteria were applied. Credibility was enhanced through member checking, where three staff participants reviewed and validated interpretations. Dependability was addressed by maintaining an audit trail of field notes and coding decisions. Confirmability was ensured by keeping detailed researcher reflexivity memos, which helped monitor and minimize potential biases throughout the research process.

Ethical Considerations

The study adhered to established ethical standards. Informed consent was obtained from all participants through signed written forms. Confidentiality was strictly maintained by anonymizing all personal data and field notes. Prior to data collection, institutional approval was obtained from PRRC to ensure compliance with ethical and administrative protocols.

Limitations

Despite its strengths, the study faced certain limitations. It did not employ quantitative methods to validate the observed patterns, which may limit the generalizability of findings. Additionally, the

presence of the researcher during observations could have introduced potential observer bias, a common challenge in qualitative fieldwork.

3.4 Data Analysis and Interpretation

This section presents the thematic findings based on field observations, interviews, and document analysis. The findings are interpreted using the dual perspectives of Human Capital Theory (HCT) and the Resource-Based View (RBV) to examine how HR practices and availability of resources affect rehabilitation outcomes at the Physical Referral Rehabilitation Center (PRRC).

Analytical Process

The analysis was systematic. Data were first organized by source and thematic significance. Field notes were categorized under HR practices (e.g., staff meetings, on-the-job training) and patient interactions (e.g., emotional reactions, adherence patterns). Transcripts of interviews were coded manually and transcribed to pick up recurring patterns and issues.

During the stage of thematic coding, data were organized into code clusters. HR issues like "overwork" and "no social worker" were commonly referenced in staff interviews (8 of 15). Patient barriers in the form of financial issues like "can't afford prosthesis" showed up in 7 of 10 patient accounts. Recovery facilitators like "family helps daily" were ubiquitous in field reporting (e.g., page 18 of field notes).

Later, the explanation of results was informed by theory. The HCT perspective concentrated on the impact of investment deficit in employee development and its implication on service delivery and quality of care. The RBV perspective highlighted strategic resource deficiencies, especially with regard to psychosocial support and financial affordability, as important bottlenecks hindering effective rehabilitation.

Key Findings

A. HR Practices and Workforce Issues (HCT Focus)

The results indicated essential workforce-related issues. Deficiencies in training were a recurring issue, with 12 of the 15 employees stating, "We learn only through experience" (Interview #4, #9). Inadequate formal training led to clinical mistakes, such as inappropriate prosthetic fittings seen in three cases, thereby hindering patient recovery.

A second major concern was staff burnout. According to the Head Physiotherapist, “We’re too exhausted to give each patient enough time.” Observations supported this claim, revealing that therapy sessions often lasted only 15 minutes half the recommended 30 minutes due to chronic understaffing. These findings suggest a direct link between poor HR investment and compromised patient care.

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B. Patient Care Barriers (RBV Focus)

Barriers to receiving patient care, most notably financial and psychosocial constraints, were also predominant. One patient was a farmer who dropped out of rehabilitation after two weeks due to his inability to afford a prosthetic leg. Field notes captured that subsidies by the government paid only ₹5,000 toward the ₹80,000 cost resulting in an insurmountable affordability gap.

Besides the financial limitations, the lack of psychosocial support had a significant impact on patients. For example, a depressed amputee who was not given any psychological counseling ultimately self-discharged from the center (Case Study 1). On the other hand, patients who were consistently supported by their families recovered almost twice as quickly, demonstrating the importance of emotional support in the rehabilitation process. These results substantiate the RBV model by illustrating how the inadequacies of resources hinder institutional performance.

3.5 Conceptual Mapping: Integrated HCT-RBV Model

The interaction between HR deficiencies and resource gaps can be conceptualized through an integrated conceptual model. Poor investment in human capital (as per HCT) results in understaffing and staff burnout. This then causes hurried or poor care and ultimately suboptimal rehabilitation outcomes. At the same time, the absence of organizational resources (as highlighted by RBV), including psychosocial support and funding for assistive devices, perpetuates the cycle of poor outcomes. For instance, a 25% staff turnover rate resulted in diminished institutional knowledge and delayed gait training, while the absence of social workers resulted in unresolved trauma, which caused increased dropout rates.

Trustworthiness Measures

To increase the credibility of the analysis, a number of strategies were utilized. Triangulation was achieved by cross-checking interview answers with field observations—such as confirming reports of overwork through documentation of reduced therapy sessions. Negative case analysis revealed two examples where highly supported staff provided high-quality care in spite of systemic problems, indicating that interventions could be successful if targeted appropriately. Reflexivity was also upheld throughout the research process through memo writing, which assisted in monitoring and reducing researcher bias.

Limitations

Although strong, the study had its limitations. The researcher's presence can potentially affect participant behavior, referred to as the observer effect. The study was limited by being conducted over a short period of time, thus precluding an examination of the long-term effect of policy reforms or institutional changes.

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Illustrative Theme: Cost Barriers Undermine Equity

One of the core thematic illustrations that emerged was cost barriers and its effect on rehabilitation equity. The patient candidly said, "The government's ₹5,000 is a joke for my artificial leg." Illustrating this, PRRC's 2023 Annual Report identified that cost-related issues caused 40% of patient dropout. Translating this in terms of RBV, the theme illustrates how a lack of finances restricts access to appropriate assistive technology, perpetuating inequity in rehabilitation outcomes.

4. Findings and Discussion

4.1 Findings

This section integrates the most important findings from the qualitative analysis and examines their implications on human resource (HR) management in rehabilitation centers, patient quality care, and policy intervention. They have been interpreted from the perspectives of Human Capital Theory (HCT) and the Resource-Based View (RBV), providing a theoretical lens through which to understand systemic constraints and strategic opportunities for intervention at the Physical Referral Rehabilitation Center (PRRC), Mana Camp, Raipur.

Workforce Challenges and HR Deficits

A critical issue identified at PRRC is staff burnout and high turnover. Sixty percent of staff members reported symptoms of burnout, including emotional exhaustion and reduced work performance. One senior physiotherapist noted, “I work 12-hour shifts but still can’t finish patient sessions properly.” Field observations supported this claim, revealing that therapy sessions lasted only 15 minutes on average, compared to the recommended 30 minutes. This heavy workload and lack of down time have led to a 25% per annum staff turnover rate and loss of trained professionals and continuity of care. These results demonstrate the ways in which poor HR conditions negatively affect rehabilitation quality.

Training gaps were another principal problem. Just 40% of staff have any type of formal training in the last year. An occupational therapist stated, "We use old techniques because no one trains us on new methods." Therapist observations during therapy confirmed that old prosthetic fitting methods were employed in three out of ten sessions. This failure to develop skills relates to longer patient recovery times, especially in gait training, which was determined to be 25% longer in under-trained situations. The lack of structured learning opportunities speaks to a strong underinvestment in human capital that constrains the efficiency of both staff and patients' outcomes.

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Patient Care Barriers

These barriers to sound patient care are also highlighted through several key examples, beginning with financial limitations. Around 65% of the patients could not afford assistive devices like prosthetics, costing between ₹50,000 to ₹100,000. One patient testified, "I left rehab because I couldn't afford a prosthetic leg." Consequently, the center saw a 40% dropout rate among economically underprivileged patients. Such economic constraints retard patients' independence and add to the long-term disability burden. The existing government subsidy, which covers a small amount of ₹5,000, seems woefully inadequate.

A further critical limitation was the lack of psychosocial support. PRRC does not have a social worker on staff, leading to neglected emotional and mental health needs in patients. For instance, one amputee said, "No one asked how I felt after losing my leg." Four out of ten amputee cases were found to have symptoms of depression during field observations, leading to low rehabilitation adherence and increased relapse rates. The absence of psychosocial care is a serious gap in patient-centered rehabilitation.

On the other hand, having strong family support was found to be a principal facilitator of rapid recovery. Patients with active family support healed 70% faster than those without. According to one patient, "My daughter helped me practice walking daily." Field notes recorded much improved mobility outcomes in instances where patients were provided with stable emotional and physical support from family members. This result indicates that caregiver participation can be strategically used through training initiatives to improve rehabilitation outcomes.

4.2 Discussion: Theoretical Interpretation

Human Capital Theory (HCT) provides a useful framework for interpreting PRRC's workforce issues. HCT posits that employee training improves productivity and quality of service (Becker, 1964). At PRRC, the low training rate (40%) represents a lost opportunity for staff performance and patient improvement. Formal, yearly training initiatives would enhance rates of recovery by 20–25% (Noe et al., 2017). In addition, the prevalence of burnout highlights a decline in human capital. With 60% of personnel suffering from burnout, the consequent 25% turnover depletes institutional memory and undermines service delivery. Instituting mental health interventions and redistributing workload could abate these impacts and enhance retention of staff.

The Resource-Based View (RBV) supplements this analysis by addressing the strategic resource constraints that impede the service delivery of PRRC. The lack of a social work department is a major resource deficiency. In the absence of specialized psychosocial support, patients' emotional concerns remain unstated, taking an unfavorable toll on rehabilitation adherence (Parker, 2017). Recruiting at least one social worker may offset dropout rates by as much as 30%. Also, patient financial limitations serve as a systemic barrier to service use. The inaffordability of prosthetics is

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a constraint to PRRC's capacity to provide equitable care and puts it at a competitive disadvantage. Increasing government subsidies to cover 50–70% of prosthetic fees could improve access and decrease dropout rates substantially (Cutler, 2018).

Policy and Practice Recommendations

In response to these challenges, a number of policy and practice recommendations are offered. First, providing competitive wages and transparent career advancement opportunities may decrease staff turnover by 15–20%. Second, the implementation of structured, AI-based skill development modules may improve staff competence and boost patient recovery rates by as much as 25%. Third, the recruitment of at least one full-time social worker would provide critical psychosocial support and decrease dropout rates by about 30%. Finally, increasing government subsidies to 50–70% of the cost of prosthetics would render assistive devices affordable for approximately 80% of low-income patients.

Challenge	Recommended Intervention	Expected Impact
High Staff Turnover	Competitive salaries + career growth paths	↓ Turnover by 15–20%
Training Gaps	AI-driven skill modules	↑ Recovery rates by 25%
No Psychosocial Support	Hire social workers	↓ Dropout rates by 30%
Prosthetic Costs	Increase subsidies to 50–70%	↑ Accessibility for 80% of patients

In conclusion, the results suggest that enhancing human capital investment and overcoming resource shortages at PRRC are keys to addressing the quality and equity of rehabilitation services. An integrated HCT and RBV strategy provides a strong framework for conceptualizing these issues and informing targeted, evidence-based interventions.

4.3 Recommendations

Based on the findings of this study, the following evidence-based recommendations are suggested to improve human resource (HR) practices, patient care, and policy mechanisms at the Physical Referral Rehabilitation Center (PRRC) and other rehabilitation centers in low-resource settings. These recommendations are categorized into four priority areas: HR interventions, patient-centered care, systemic reforms, and research and monitoring.

1. Human Resource (HR) Interventions

To meet human resource-related difficulties, targeted intervention in staff hiring, retention, and training are necessary. A first step should be to balance PRRC's salary scale against private healthcare facility salary scales in order to halt the 25% yearly employee turnover.

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Institutionalizing career advance opportunities such as promotion into Senior Therapist positions has the potential to encourage long-term service and better staff morale.

Mental wellbeing and mental health programs need to be put in place to address the extensive levels of burnout, which were experienced by 60% of employees. Regular counseling sessions every month and adopting flexible shift patterns can help curb work-related stress and prevent overwork, which was a long-standing issue identified by 70% of employees. Annual, formal training has to be put in place to fill skill gaps. Partnerships with the International Committee of the Red Cross (ICRC) or domestic physiotherapy associations can facilitate the provision of certified training modules. For easier and more affordable training, PRRC can integrate AI-powered learning platforms, as suggested by Nguyen et al. (2021). Incentives tied to performance such as tying promotions or bonuses to patient recovery indicators (e.g., gait improvement percentages) can also encourage employees to improve their performance.

2. Enhancements in Patient-Centered Care

Improving the affordability and accessibility of assistive devices is critical for patient rehabilitation success. A significant proportion of patients at PRRC are unable to afford prosthetics, contributing to high dropout rates. Therefore, it is recommended that PRRC advocate for increased government subsidies raising the support from ₹5,000 to at least 50% of the total cost of devices (Cutler, 2018). Besides, partnerships with charitable institutions like the Rotary Club would assist in accessing donation-funded prosthetics. Flexible installment payment plans would also allow patients to pay within 6 to 12 months, making necessary assistive devices more affordable.

Psychosocial support must be institutionalized by setting up a specific social work department. Even employing one or two experienced social workers would have a positive effect on patient well-being by offering trauma counseling, family instruction, and post-amputation support ultimately enhancing rehabilitation compliance. Adding peer support groups, with monthly patient sessions, can create the feeling of community and shared recovery experiences. These actions would not only attend to emotional requirements but also impact improved long-term health outcomes.

3. Systemic and Policy-Level Changes

To enhance PRRC's service delivery infrastructure, some of the following systemic changes are proposed. The center needs to improve its facilities to provide for the segregation of male and female wards, which would be more dignifying for patients and private a need that was seen during field observations. Secondly, acquiring financing for a dedicated ambulance service would ease rural patients' access, many of whom already experience transport difficulties.

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On a policy level more broadly, PRRC and others should lobby for the implementation of national HR standards for rehabilitation facilities. These must include minimum staffing-to-patient ratios and regular annual training obligations. In addition, the integration of rehabilitation services and prosthetic provision into India's Universal Health Coverage (UHC) initiative namely under the Ayushman Bharat program would provide more even access to fundamental services for all patients, no matter their financial status.

4. Research and Monitoring

To validate and refine these interventions, ongoing research and monitoring are crucial. A pilot intervention could be initiated to test the effectiveness of AI-driven training modules with a sample of five staff members. Patient recovery outcomes should be measured over a six-month period to assess the impact of this approach. Moreover, longitudinal research must be undertaken yearly to monitor the correlation between HR enhancements and patient recovery rates. This would offer proof for or modifying approaches in the long term, maintaining a constant process of improvement in service delivery.

Expected Outcomes

Intervention	Short-Term (1 Year)	Long-Term (3–5 Years)
Staff Mental Health Programs	↓ Burnout by 20%	↓ Turnover to 15%
Social Work Department	↓ Dropout rates by 25%	↑ Patient satisfaction by 40%
Prosthetic Subsidies (50%)	↑ Device accessibility by 50%	↓ Long-term disability burden

If executed, these recommendations are anticipated to produce quantifiable results. On the short-term front (within a year), burnout among the staff could decline by 20%, and a social work department introduced could make the dropout from care by the patients decrease by 25%. In the medium to long term (three to five years), staff turnover would come down to 15%, patient satisfaction rise by 40%, and access to prosthetic appliances improve by 50% considerably lowering long-term disability.

5. Conclusion

This research explored the pivotal connection between human resource (HR) practices and rehabilitation outcomes at the Physical Referral Rehabilitation Center (PRRC), where systemic shortfalls undermine staff performance and patient recovery in a low-resource health facility in

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India. The results emphasize the compelling demand for comprehensive strategies to tackle institutional and patient-centered challenges.

To begin with, the research showed that HR shortages directly affect the quality of care. Continuous understaffing evidenced by 70% of employees indicating excessive workload and a high yearly turnover rate of 25% interrupt the continuity of rehabilitation processes. Furthermore, a mere 40% of employees underwent formal training within the last year, leading to antiquated procedures that delay patient progress and impact overall recovery outcomes.

Second, patient outcomes are also heavily impacted by systemic barriers. A whopping 65% of patients cannot afford necessary assistive devices, including prosthetics, which greatly hinders their capacity to regain mobility and independence. Furthermore, the lack of psychosocial support at PRRC worsens emotional trauma for patients, causing higher dropout rates and lower adherence to rehabilitation plans.

In spite of these issues, family support proved to be a revolutionary element in patient recovery. Patients with high levels of family engagement were seen to recover 70% quicker than their peers, highlighting the importance of caregiver-integrated models of rehabilitation. This calls for PRRC to establish family education programs and empower caregivers as part of the recovery process.

The conclusions also supported two central theoretical frameworks. Human Capital Theory (HCT) reaffirms that overinvestment in employees' training and well-being decays the quality of care and institutional productivity. Likewise, the Resource-Based View (RBV) reveals how the absence of key resources like social work services and fiscal support renders the center unable to provide efficient rehabilitation.

To end this cycle of inefficiency and less-than-optimal results, PRRC needs to take bold action. HR investments, including competitive pay, mental health support initiatives, and AI-based training modules, are critical in developing a strong and capable workforce. Closing patient care gaps through the subsidizing of prosthetic limbs, the employment of social workers, and the encouragement of family involvement will also make patient-centered service delivery possible. In addition, advocacy for policy changes at the national level like setting HR standards for rehabilitation facilities and including assistive devices in universal health coverage programs can provide systemic support for sustainable rehabilitation.

In summary, this research provides a pragmatic roadmap for the transformation of rehabilitation services in low-resource environments. Focusing on staff empowerment and whole-person support can transform rehabilitation from crisis management to sustainable, person-focused recovery. Future studies need to pilot these hypothesized interventions through multi-center trials to build scalable models that can be replicated in various healthcare settings.

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