

International Open-Access, Peer-Reviewed, Refereed, Online Journal

ISSN (Print): 2321-7510 | ISSN (Online): 2321-7529

| An ISO 9001:2015 Certified Journal |

## Strengthening Patient Advocacy through HR Nurturing Connects: Insights from Post-COVID Bhaktivedanta Hospital

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#### **Abstract**

This study examines the role of Human Resource Nurturing Connects (HRNCs) in strengthening compassion and empathy among physicians and surgeons, and how these qualities influence patient advocacy within clinical practice. A two-arm prospective randomized controlled trial was conducted over a 12-month period involving 30 physicians (15 intervention, 15 control) at Bhaktivedanta Hospital & Research Institute. The intervention group underwent structured HRNCs, including one-on-one coaching, empathetic listening modules, role clarity sessions, and feedback mechanisms. Outcomes were assessed using two validated instruments: the Bhaktivedanta Index of Compassion and Empathy in Physicians and Surgeons (BICEPS) and the Patient Advocacy Score (PAS), each comprising 25 items. Statistical analysis using the Mann-Whitney U test demonstrated a significant improvement in both BICEPS (mean increase from 65.47 to 83.79) and PAS (mean increase from 64.48 to 90.12) in the intervention group compared to minimal change in the control group. These findings establish that structured HR-based interventions can materially enhance physicians' empathetic and compassionate conduct, thereby fortifying patient advocacy as a professional obligation. At the same time, higher PAS scores reflect a perceptible strengthening of advocacy by patients, manifested through improved trust, communication, and patient participation in care.

The study underscores that HR-driven emotional nurturing is not ancillary but central to patient-centered healthcare, with implications for clinical practice, institutional policy, and broader reforms in post-COVID medical law and ethics.

**Keywords:** Human Resource Nurturing Connects (HRNCs), Compassion, Empathy, Physicians, Patient Advocacy, BICEPS Scale, PAS Scale, Post-COVID Healthcare, Bhaktivedanta Hospital, Emotional Intelligence in Clinical Practice

#### 1. Introduction

The COVID-19 pandemic has fundamentally altered the landscape of healthcare delivery, raising complex challenges for both patient advocacy—the professional and institutional obligation to safeguard patient rights, ensure equitable access, and provide patient-centered care—and advocacy by patients, which reflects the proactive role of patients in voicing their needs, concerns, and experiences. Post-COVID-19 conditions, often referred to as "long COVID," continue to affect millions globally. According to the World Health Organization, these conditions have significant and persistent health impacts, requiring robust systems of care and protection (World Health Organization, 2025).



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Post-COVID conditions encompass a spectrum of physical, cognitive, and psychological symptoms that extend beyond the acute phase of infection. Empirical research has documented the variability of recovery trajectories and the long-term socio-economic implications of delayed rehabilitation (Su et al., 2022; Tenforde et al., 2020). In this context, the terminology "long COVID"—coined and promoted by patients themselves—illustrates the growing importance of advocacy by patients in shaping medical discourse and influencing policy frameworks (Callard & Perego, 2021; Perego et al., 2020).

To address these evolving needs, healthcare institutions have begun adopting innovative frameworks that integrate clinical care with organizational and human resource strategies. Among these, Human Resource Nurturing Connects (HRNCs) stand out as a systematic model that enhances emotional intelligence, interpersonal sensitivity, and professional role clarity among physicians. Unlike conventional HR practices limited to recruitment and compliance, HRNCs are designed to nurture physicians' emotional well-being and thereby strengthen patient advocacy within clinical practice.

The theoretical foundations for HRNCs are drawn from established social support theories and stress-buffering models (Gore, 1981; Cohen, 1988), which posit that structured support systems can mitigate stress and enhance resilience. Bhaktivedanta Hospital, Mumbai, has pioneered the application of HRNCs in post-COVID care by aligning institutional policies with patient-centered advocacy strategies, thereby creating a framework where professional obligations to protect patient rights are reinforced and patients themselves feel empowered to engage in advocacy by patients.

#### 2. Literature Review

#### 2.1 Post-COVID-19 Conditions and Patient Advocacy Needs

Post-COVID-19 conditions, or "long COVID," present novel challenges for healthcare delivery systems and raise urgent demands for both patient advocacy and advocacy by patients. Long-haul symptoms—including fatigue, dyspnea, cognitive dysfunction, and psychological distress—can persist for months, substantially impairing quality of life and functional capacity (Nath, 2020). Systematic reviews have highlighted the heterogeneity of post-COVID experiences, underscoring the necessity of comprehensive patient advocacy mechanisms within clinical practice, such as care coordination, rights protection, and equitable access to multidisciplinary support (Gutzeit et al., 2025).

The National Academies of Sciences, Engineering, and Medicine (2024) emphasize the multisystem and long-term character of post-COVID conditions, recommending integrated frameworks where patient advocacy is formally embedded into treatment pathways. Such frameworks not only safeguard patient rights but also ensure continuity of care across medical, psychological, and social domains.

At the same time, the patient-coined terminology "long COVID" itself illustrates a powerful form of advocacy by patients. By naming and framing their experiences, patients have influenced public health recognition, clinical definitions, and policy discourse (Callard & Perego, 2021; Perego et al., 2020). This active role exemplifies how patient voices—through



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collective organizing, self-reporting, and community engagement—serve as catalysts for reform, complementing physician-driven patient advocacy.

Global prevalence studies suggest that approximately 43% of COVID-19 survivors suffer from long-term sequelae, with recovery patterns varying by demographic and clinical factors (Chen et al., 2022). Cognitive impairments, often described as "brain fog," create barriers to navigating healthcare systems and reinforce the need for institutional patient advocacy—for example, in ensuring informed consent, access to rehabilitation, and assistance with disability claims (Jaywant et al., 2024). Simultaneously, these barriers necessitate strengthening advocacy by patients, equipping them to articulate their needs and participate meaningfully in shared decision-making.

Taken together, the persistence of post-COVID conditions demands a dual framework: healthcare institutions must institutionalize patient advocacy as a legal and ethical obligation, while simultaneously cultivating environments where advocacy by patients is supported, validated, and integrated into care planning.

#### 2.2 Employment and Economic Impacts

The employment consequences of post-COVID conditions are significant, with many patients reporting reduced work capacity, job loss, or long-term unemployment (Perlis et al., 2023). Regional studies, such as in Hawaii, confirm distinct unemployment patterns linked to long COVID, reinforcing the need for patient advocacy through workplace accommodations, disability benefits, and anti-discrimination measures (Bonham et al., 2023).

Equally important is advocacy by patients, as individuals living with long COVID have voiced their experiences through qualitative studies and patient-led forums. These testimonies highlight the struggles of balancing symptom management with financial insecurity, while also pushing employers and policymakers to recognize long COVID as both a medical and socio-economic challenge (MacEwan et al., 2024). Together, these efforts underscore that recovery extends beyond clinical care to include protection of economic rights.

#### 2.3 Mental Health and Psychological Support

The mental health impacts of long COVID are now well established, with patients frequently experiencing anxiety, depression, cognitive decline, and social isolation (Pietrzak & Hanke, 2024; Hossain et al., 2023). These manifestations underline the importance of patient advocacy, ensuring that mental health support is integrated into long COVID treatment frameworks and that patients' rights to privacy, dignity, and informed care are upheld (Michelen et al., 2021; Yong, 2021).

In parallel, advocacy by patients has been central in drawing attention to these psychological burdens. Patient-led support groups, online communities, and awareness campaigns have given visibility to lived experiences of distress, challenging stigma and urging healthcare systems to broaden mental health coverage. This dual framework—legal and institutional safeguards through patient advocacy, combined with patient-led mobilization—offers a comprehensive approach to addressing the psychological dimensions of long COVID.

#### 2.4 Social Support and Buffering Effects



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Social support is increasingly recognized as a determinant of health and thus integral to patient advocacy as a legal and ethical obligation. The stress-buffering hypothesis (Cohen & Wills, 1985) shows that structured support systems can mitigate the adverse health effects of stress, a finding particularly relevant to post-COVID care. Empirical studies during the pandemic confirm that perceived social support reduces depression, improves sleep, and even correlates with clinical recovery (Grey et al., 2020; Yang et al., 2020).

For healthcare institutions, this creates a duty to incorporate counseling, peer networks, and family engagement into advocacy frameworks. At the same time, advocacy by patients—through peer groups, online forums, and community initiatives—demonstrates how patient-led efforts strengthen resilience and amplify calls for responsive care.

The structural dimensions of social support, including network size and relationship quality, have been shown to directly influence health outcomes (House, 1987; Holt-Lunstad, 2018). Accordingly, patient advocacy must extend beyond clinical treatment to safeguarding relational and social rights as part of comprehensive healthcare delivery.

#### 2.5 Workplace and Organizational Support

Occupational health research highlights the centrality of social support in the workplace, with direct implications for HR-driven patient advocacy (Baruch-Feldman et al., 2002). The theory of optimal matching (Cutrona & Russell, 1990; Cutrona & Suhr, 1992) underscores that specific stressors require tailored forms of support, offering guidance for structuring HR Nurturing Connect (HRNC) interventions that address physician burnout and enhance patient-centered care.

In the post-COVID context, patient advocacy requires institutions to embed supportive mechanisms—coaching, role clarity, and feedback structures—into organizational policy, aligning with legal duties of employee well-being and safe workplace practices. Simultaneously, advocacy by patients is reinforced through online support groups and digital communities, which provide mutual aid, reduce isolation, and generate collective pressure for systemic change (Benson et al., 2020).

Conceptual analyses confirm that the quality, type, and accessibility of workplace and social support determine effectiveness (Langford et al., 1997). Legally and ethically, this situates workplace support as more than a managerial choice: it is part of the broader framework of patient advocacy, linking physician welfare to the protection of patient rights.

#### 3. Methodology

#### 3.1 Research Design

The study employed a quantitative, prospective, two-arm randomized controlled trial (RCT) design to evaluate the impact of Human Resource Nurturing Connects (HRNCs) on the development of compassion and empathy in physicians and its influence on patient advocacy. This design was selected to objectively measure changes in clinical emotional intelligence over time and to establish causality between HR interventions and patient-centered outcomes.



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#### 3.2 Study Setting and Duration

The study was conducted at Bhaktivedanta Hospital & Research Institute, along with two affiliated units—Sheth P. V. Doshi Hospital, Mira Road, Thane and Radha Madhav Hospital, Barsana. The duration of the study spanned 12 months, including baseline assessment, three intervention phases, and final post-assessment.

#### 3.3 Sample and Participants

The sample comprised 30 physicians and surgeons, divided into two equal groups:

- **Group A (Intervention Group)**: 15 physicians who underwent the HRNC intervention modules.
- **Group B (Control Group)**: 15 physicians who did not receive any HRNC inputs during the study period.

Participants were selected using convenience sampling, based on the availability and willingness of physicians at Bhaktivedanta Hospital and its affiliated units to participate in the study. This approach was adopted considering the practical constraints of physician schedules and workload distribution, which made it more feasible to recruit accessible participants rather than apply stricter sampling frames. While convenience sampling limits the generalizability of findings, it was suitable for this exploratory study within a controlled institutional setting.

#### Intervention Description

The HR Nurturing Connects (HRNCs) included:

- One-on-One Coaching
- Empathetic Listening Modules
- Team Alignment and Role Clarity Sessions
- Feedback Mechanisms and Burnout Support Structures

The intervention was delivered across three structured phases over the study period.

#### Measurement Tools

### 1. BICEPS (Bhaktivedanta Index of Compassion and Empathy in Physicians and Surgeons):

A 25-item validated scale designed to assess emotional empathy, interpersonal sensitivity, and compassionate care among physicians and surgeons. The tool provides a comprehensive measure of physicians' emotional intelligence in clinical interactions, with higher scores indicating stronger compassion and empathy.

#### 2. PAS (Patient Advocacy Score):

A 25-item instrument capturing patients' perceptions of their physician's advocacy behaviors. The PAS reflects how effectively physicians engage in communication, trust-building, and proactive support for patients. Scores were obtained from patients linked to each participating physician and recorded on a Likert scale.

#### 3.4 Data Collection and Phases

• **Phase 1 (Baseline Assessment):** BICEPS and PAS scores were recorded prior to the introduction of HRNCs.



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- Phases 2, 3, and 4 (Post-Deployment Assessments): After the baseline, HRNCs were deployed, and all subsequent phase-wise assessments represent post-deployment outcomes. During each phase, the intervention group received structured HR inputs and their BICEPS and PAS scores were measured accordingly.
- Phase 5 (Final Post-Intervention Assessment): Endline scores were collected using the same tools to evaluate the cumulative effect of the HRNC interventions.

#### 3.5 Statistical Techniques

Data were analyzed using:

- **Descriptive statistics** (mean, standard deviation)
- Mann-Whitney U Test to compare the difference between intervention and control groups
- Spearman's Rank Correlation to assess the relationship between BICEPS and PAS scores

All analyses were performed at a 95% confidence level (p < 0.05) using IBM SPSS (Version 21).

#### 4. Results

This section presents the quantitative findings of the study derived from a 12-month randomized controlled trial involving 30 physicians divided equally into intervention and control groups. The impact of HR Nurturing Connects (HRNCs) was evaluated using two psychometric tools: the BICEPS Scale and the Patient Advocacy Score (PAS).

#### 4.1 Comparison of BICEPS Scores (Compassion and Empathy)

At baseline, both groups showed comparable BICEPS scores, indicating no significant difference in measured compassion and empathy. However, after the implementation of HRNCs in the intervention group, a statistically significant improvement was observed.

Table 4.1 : Pre- and Post-Intervention Comparison of BICEPS Scores Between Intervention and Control Groups

Group	Mean (Pre)	SD (Pre)	Mean (Post)	SD (Post)
Intervention	65.47	3.14	83.79	2.67
Control	64.93	2.97	65.27	3.12

Mann-Whitney U Test (Post Intervention):

- U = 12.000, Z = -4.014, p < 0.001
- Interpretation: Statistically significant improvement in BICEPS scores in the intervention group.

#### 4.2 Comparison of PAS Scores (Patient Advocacy)



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The PAS was computed from the average scores of seven patients per physician post each intervention phase. The results reflect patient perception of the physician's advocacy behavior.

Table 4.2: Pre- and Post-Intervention Comparison of Patient Advocacy Scores (PAS)

Between Intervention and Control Groups

Group	Mean (Pre)	SD (Pre)	Mean (Post)	SD (Post)
Intervention	64.48	2.71	90.12	3.06
Control	63.92	2.49	64.67	2.82

Mann-Whitney U Test (Post Intervention):

- U = 14.500, Z = -3.949, p < 0.001
- Interpretation: HRNC interventions significantly enhanced patient-perceived advocacy behavior among physicians.

#### 4.3 Phase-wise Progression of BICEPS Scores

The intervention group's BICEPS scores showed a steady upward trend across all three phases:

Table 4.3: Phase-wise Progression of BICEPS Scores in the Intervention Group

Phase	Mean Score	SD
Phase 1	65.47	3.14
Phase 2	72.60	2.85
Phase 3	79.93	2.42
Phase 4	83.79	2.67

This indicates a progressive improvement in emotional empathy and compassion following each HRNC session.

#### 4.4 Correlation between BICEPS and PAS

To understand the relationship between physician empathy and patient advocacy, a Spearman's Rank Correlation was conducted:

Table 4.4: Spearman's Rank Correlation Between BICEPS and PAS Scores Across
Phases



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Phase	Correlation Coefficient (ρ)	Significance (p)
Phase 1	0.48	0.046
Phase 3	0.66	0.006
Phase 4	0.73	0.002

The correlation strengthened significantly across phases.

Interpretation: As compassion and empathy in physicians increased (BICEPS), patient advocacy also increased (PAS).

#### 5. Discussion

The findings of this study suggest that Human Resource Nurturing Connects (HRNCs) significantly enhance compassion and empathy in physicians and surgeons, which in turn contributes to stronger patient advocacy. Unlike conventional HR practices limited to recruitment, compliance, or performance appraisals, the HRNC model emphasizes emotionally intelligent leadership, interpersonal sensitivity, and physician well-being—factors that are increasingly critical in post-pandemic healthcare environments.

#### 5.1 Impact of HRNC on Compassion and Empathy (BICEPS)

The marked improvement in BICEPS scores among the intervention group over a 12-month period highlights the efficacy of structured HR interventions in cultivating emotional sensitivity. Physicians exposed to role clarity modules, one-on-one coaching, and empathetic listening frameworks developed greater internal motivation for compassionate care. This aligns with literature emphasizing the emotional labor of caregiving roles and the need for institutional support to sustain such behaviors.

#### 5.2 Enhancement of Patient Advocacy (PAS) through Emotional Nurturing

The significant rise in PAS demonstrates that patients perceived greater trust, communication, and engagement from their physicians. These are not merely interpersonal improvements but fulfill the legal and ethical obligations of patient advocacy, wherein physicians are bound to safeguard patient rights and ensure patient-centered care. The results confirm that HRNC interventions translate internal emotional nurturing into externally enforceable standards of professional duty and care quality.

#### 5.3 Correlation Between Physician Empathy and Patient Advocacy

The strong positive correlation between BICEPS and PAS confirms that physician empathy is not only a personal attribute but a professional duty linked to patient advocacy. By fostering trust and ensuring responsive care, empathy directly advances the legal and ethical obligation to protect patient rights. The correlation values ( $\rho = 0.73$ , p < 0.01 in Phase 4) provide empirical validation that emotional competence reinforces advocacy as an enforceable standard of clinical practice.



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#### 5.4 Practical Implications for Healthcare Institutions

This study demonstrates that integrating HR development into clinical training is not merely optional but aligns with the legal and ethical obligations of patient advocacy. By investing in HRNCs, institutions safeguard physician well-being while fulfilling their duty to ensure patient rights, satisfaction, and trust. Non-clinical elements—listening, validation, and relational competence—must therefore be treated as strategic and legally relevant priorities in healthcare delivery.

#### 5.5 Contribution to Post-COVID Healthcare Reforms

In the post-COVID era, marked by physician burnout and patient vulnerability, HRNCs offer a scalable framework for fulfilling the legal and ethical mandate of patient advocacy. By restoring empathy, trust, and relational integrity between caregivers and patients, HRNCs extend healthcare reforms beyond clinical recovery to the protection of patient rights and the reinforcement of humane, rights-based care delivery.

#### **5.6 Theoretical Implications**

This study establishes HRNC as a framework linking human resource development with clinical empathy, showing that emotional intelligence is not only a management tool but a means of fulfilling the legal and ethical obligations of patient advocacy. The correlation between BICEPS and PAS validates that internal nurturing translates into externally observable behaviors, reinforcing advocacy as a professional standard grounded in duty and rights-based healthcare.

#### **5.6 Limitations**

Despite its significant findings, this study has limitations. The small sample size of 30 physicians from a single institution restricts wider generalizability. The use of self-reporting tools (BICEPS and PAS) may introduce bias, and patient advocacy was assessed indirectly through perceptions rather than direct behavioral observation. Further, the long-term retention of emotional intelligence gains beyond the 12-month period was not examined, limiting conclusions about sustained compliance with advocacy as a continuing professional duty.

#### 5.7 Clinical and Policy Implications

This study demonstrates that HRNCs strengthen empathetic communication, reduce burnout, and enhance patient advocacy as a professional duty, thereby improving care quality in post-pandemic settings. Clinically, integrating HR-based emotional intelligence frameworks into physician training supports compliance with ethical and rights-based obligations. From a policy standpoint, healthcare institutions and regulators should institutionalize HRNCs and incorporate metrics such as BICEPS and PAS into performance evaluations, thereby embedding emotional competence and patient advocacy as enforceable standards in healthcare delivery.

#### 6. Conclusion

This study confirms that Human Resource Nurturing Connects (HRNCs) provide a transformative framework for enhancing compassion, empathy, and patient advocacy as a legal and ethical obligation. The 12-month randomized controlled trial demonstrated that



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physicians exposed to HRNCs achieved significantly higher BICEPS and PAS scores, evidencing measurable improvements in both empathy and advocacy.

In the post-COVID context of physician fatigue and strained doctor-patient relationships, HRNCs validate the role of emotionally intelligent HR practices as essential to safeguarding patient rights and ensuring equitable, patient-centered care. By aligning professional duties with relational sensitivity, HRNCs reinforce that nurturing physician well-being is not ancillary but central to lawful, ethical, and sustainable healthcare delivery.

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ISSN (Print): 2321-7510 | ISSN (Online): 2321-7529

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