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Outcomes of Physiotherapy by Including Cultural Safety Practices in the Management Protocol

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Abstract

Background: A worldwide health justice gap is jeopardizing health outcomes globally, including in children's forests; methods are rapidly adopting regular hybrid roles and the patient solution to the customer care problem. The researchers are theoretically suggesting how a non-traditional inclusive nowadays 'reality patient gifted by the subject' approach of collated direction having a bimodal cultural worker and the need for complete Rural Safety was efficiently implemented.

This is a quasi-experimental congress-veritable prospective study having the city of Ahmedabad as the venue, and the years from 2019 to 2024 as the time frame-data at Safalya Mind and Body Clinic. The study sample consisted of 127 patients affected with different disorders (the musculoskeletal system, nervous system, orthopedics, and pediatrics); they were divided into an Intervention Group (IG) and a Control Group (CG). An acronym -CS-PMP was associated with a cultural context checklist, and "yarning" discussions which, respectively, implied providers' self-reflection, engagement in joint decision-making through the use of a cultural context checklist, and "relationship-building" time. Primary outcome metrics were Treatment Adherence Rate (TAR) and change of the Patient-Specific Functional Scale (PSFS). Secondary outcome included scores of the Cultural Humility Scale (Client-Rated) and the Patient-Reported Experience Measure (PREM). Independent t-tests were used to analyze the data comparing differences between groups.

Results: This work presented the performance of the CS-PMP group as superior in all the measured parameters of the study. The mean TAR for the CS-PMP group exceeded that of the Control Group. The change in PSFS was larger for the CS-PMP group than for the Control Group. Patients in the CS-PMP group awarded higher scores of cultural humilities.

Conclusion: By implementing culturally safe treatment methods in physiotherapy leading not only to enhanced patient results but also to increased compliance to prescribed treatment regimens across villages and urban areas characterized by culturally diverse cities in India. The findings of this study indicate that combining cultural safety practices as a mandatory activity can facilitate the provision of fair and efficient health care in rehabilitation consistent with their condition progress.

Keywords: Physiotherapy; Cultural Safety practices; Treatment Adherence Rate; Cultural Humility Scale

1. Introduction

Physiotherapy treatment success is largely instrumental on patient participation, commitment to home exercise routines, and that trust bonds the patient with the medical professional [2]. Moreover, around the globe marginalized populations that are culturally, linguistically and socio-economically diverse have significant health disparities which

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are prominently reflected as lower accesses, poor adherence and dissatisfaction with healthcare models that are heavily weighted towards the Western worldview [3]. The diverse patient population of Indian cities and countryside, multilingual (English, Gujarati, Hindi) people, and patients of various socio-economic strata have set an unprecedented challenge for standardizing care in India [4]. What patients in India expect usually urge that treatments should be applied on them while at the same time there are cultural norms that might be antagonistic with active rehabilitation prescription thus, they might end up being non-compliant in a big way [5, 13]. These socio-cultural barriers have to be considered especially because they are the main influencers of patient motivation at the end of recovery period [14].

The idea of Cultural Safety (CS) was first introduced as an improvement over Cultural Competence. Contrary to competence, which puts more emphasis on knowledge gained by the provider, safety is the patient's subjective experience when he/she receives care that respects his/her distinction and at the same time is free from discrimination and unaddressed power relations [6]. CS also requires that care providers take on the role of constant self-reflection and confront their own biases [7, 15]. The present research argues that transforming cultural safety values along with a detailed management plan (CS-PMP) can have a direct correspondence to ethics and clinical as well as patient-reported outcomes, hence advancing the health service responsiveness [16].

Physiotherapy research is fraught with the lack of direct and rigorous ways to back up the causality of a well-defined cultural safety intervention leading to measurable clinical endpoints like functional improvement or therapy adherence although the primary ethical mandate for such studies keeps on growing. [7]. It is a "must" to rely on patient-reported outcome measures (PROMs) when determining the effectiveness of culture-related interventions for confirmation of clinical practice.[17]

Purpose of the Research: The focus was to assess differences in a physiotherapy management protocol specific to cultural safety versus a standard protocol regarding treatment adherence and functional recovery in a diverse patient population from Ahmedabad, India.

Hypothesis: It is expected that the patients in the care group following the CS-PMP protocol will show statistically significant progress, better compliance, as well as higher satisfaction with the safety and trust experienced compared to patients in the SP group.

2. Materials and Methods

2.1. Experimental Design and Research Venue

This research was a 5-year prospective, quasi-experimental comparative study performed at Safalya Mind and Body Clinic, Ahmedabad, India from January 2019 through December 2024. The difficulty of ethically and logistically blinding the therapists as to whether a cultural safety intervention was being delivered led to the decision of the quasi-experimental design [18].

2.2. Participants and Sampling

There were patients in the study who had been enrolled. In a consecutive manner, subjects are randomly divided into the Intervention Group (CS-PMP) and the Control Group (Standard Protocol).

2.3. Inclusion Criteria

Ages 18 to 75 years old.

In a primary musculoskeletal, orthopedic, neurological, or pediatric developmental disorder diagnosed that needs at least 6 physiotherapy sessions.

Patients representing the diverse catchment area (city and rural) of the clinic, various socio-economic classes, and one of the three main languages (English, Gujarati, and Hindi).

2.4. Exclusion Criteria

Inability to give informed consent.

Serious cognitive decline that completely inhibits the execution of outcome measures.

Table 1 Baseline Demographic and Clinical Characteristics

Characteristic	Control Group (SP) (n=64)	Intervention Group (CS-PMP) (n=63)	p-value (Comparison)
Age (Mean ± SD, years)	41.3±12.8	42.1±13.5	0.741
Gender (Male: Female ratio)	33:31:00	32:31:00	0.902
Rural Residence (%)	40.60%	41.30%	0.932
Primary Diagnosis Distribution			
Musculoskeletal	16	16	1
Neurological	17	15	0.672
Orthopaedic (Post-operative/Fracture)	16	17	0.801
Paediatric/Others	15	15	1
Baseline PSFS Score (Mean ± SD)	3.1±0.9	3.2±0.8	0.605

The p-values demonstrate no statistically significant difference in baseline characteristics, ensuring comparability between groups.

2.5. Interventions

2.5.1. Control Group: Standard Protocol (SP)

The group of patients was treated with conventional evidence-based physiotherapy following the clinical guideline of their disorders. Treatment was roughly 45 minutes long per session.

2.5.2. Intervention Group: Cultural Safety Protocol (CS-PMP)

Apart from the standard evidence-based treatment, therapists who were in this group received compulsory training on **Cultural Humility** [1] and the below-mentioned organized procedures were carried out by them:

- **Cultural Context History (First 10 minutes):** Time was spent talking and sharing stories in a non-clinical, **"yarning"**-style conversation [8] with the patient to get a better understanding of the context, e.g., their family/community support structure, their beliefs of pain lineage, and the traditional health practices they follow. The mentioned approach is quite effective for establishing a good rapport with culturally diverse populations [19].
- **Explicit Consent: Verbal and written** consent were mandatory for every hands-on technique and were always presented as a trauma-informed practice.
- **Shared Goal Setting:** A checklist was used to make sure the rehabilitation goals explicitly addressed the patient's defined cultural needs (e.g., ability to do certain chores, prayer rituals, or wear traditional clothing during exercises). Goal determination was accomplished through employing a culture-specific approach to goal setting to ensure that they were relevant [12, 20].
- **Flexible Home Programs:** The home exercise program was first evaluated and then adjusted to fit the social and environmental barriers (e.g., no private space, joint family living, work schedule). Patient-centered interventions of a cultural nature led to higher patient uptake and self-efficacy [21].

2.6. Outcome Measures

- **Primary Outcome 1: Treatment Adherence Rate (TAR):** It shows as a percentage of the prescribed home exercise program sessions completed, according to patient logs and self-report checklists over the treatment duration. This is an essential indicator of a patient's engagement and the establishment of a therapeutic alliance [2].
- **Primary Outcome 2: Patient-Specific Functional Scale (PSFS):** The scale on which patients assess the difficulty of no more than five necessary activities on an 11-point scale (0=totally unable to perform, 10=totally able to perform at the pre-injury level). For comparison, the change score (final - initial) was applied [9]. PSFS is very sensitive to change and is patient-centered [22].

- **Secondary Outcome 1: Cultural Humility Scale (CHS, Client-Rated):** Patient-rated provider cultural humility is measured by a 12-item scale in which the patient evaluates the provider, taking into account factors such as respect, openness, and recognition of power differences, with higher scores reflecting greater perceived respect, openness, and acknowledgement of power differentials (range 12-60) [1].

Secondary Outcome 2: Patient-Reported Experience Measure (PREM): a specially designed 10-item scale that evaluates the overall satisfaction, trust, and feeling of being "heard" and "safe" during treatment (range 0-50). PREMs are becoming more and more important for assessing the quality of care provided by the patient perspective [17].

2.7. Statistical Analysis

Data analysis was performed using SPSS version 26. Descriptive statistics (Mean and Standard Deviation, SD) were calculated for all measures. Independent samples -tests were used to compare the continuous outcome measures between the CS-PMP and SP groups. **Statistical significance was set at** to account for multiple comparisons and ensure a high degree of confidence in the effect [23].

3. Results

3.1. Primary Outcome Results: Functional Improvement and Adherence

The analysis revealed a statistically significant advantage for the Cultural Safety Management Protocol across both primary outcomes, supporting the study hypothesis.

Table 2 Comparison of Primary Outcome Measures (Mean SD)

Outcome Measure	Control Group (SP) (n=64)	Intervention Group (CS-PMP) (n=63)	Mean Difference	t-statistic	p-value
Treatment Adherence Rate (TAR, %)	68.2±8.9	84.7±5.1	16.5	12.38	<0.001
PSFS Change Score (Δ points)	2.8±1.2	4.2±1.1	1.4	6.87	<0.001

As shown in **Table 2**, the CS-PMP group exhibited a higher average Treatment Adherence Rate compared to the Standard Protocol group. Furthermore, the mean improvement in the patient's ability to perform self-selected functional activities (PSFS Change Score) was points higher in the intervention group. Both differences were highly statistically significant.

3.2. Secondary Outcome Results: Patient-Reported Measures

The patient-reported data strongly confirmed the intervention's positive effect on the therapeutic environment.

Table 3 Comparison of Secondary Outcome Measures (Mean SD)

Outcome Measure	Control Group (SP) (n=64)	Intervention Group (CS-PMP) (n=63)	Mean Difference	t-statistic	p-value
Cultural Humility Scale (CHS)	38.9±5.2	51.1±3.4	12.2	15.55	<0.001
PREM (Trust/Safety Score)	32.4±4.5	44.8±3.1	12.4	17.88	<0.001

The Cultural Humility Scale (CHS) and the PREM scores demonstrated a remarkable and highly significant increase in the CS-PMP group (). This suggests that the structured cultural safety components (yarning, explicit consent, shared goals) successfully fostered a patient experience characterized by greater perceived respect and trust.

4. Discussion

This research gives clear, measured proof that the purposeful integration of cultural safety measures into a physiotherapy management protocol is not just an option in morals but a **major lever for clinical effectiveness**. The notable progress seen in both Treatment Adherence Rate (TAR)

4.1. Link Between Cultural Safety and Clinical Outcomes

The rise in TAR is the most convincing result, revealing a critical association between the patient's subjective experience and objective clinical success. Low adherence has been identified in previous research as a key factor in culturally diverse groups due to the perception of disrespect, lack of involvement, and conflicts between treatment and cultural duties [10]. The CS-PMP was directly addressing these issues by giving priority to:

Trust over Technique: The compulsory "yarning" time created a strong therapeutic alliance, which was reflected in the high PREM and CHS scores. When a patient is safe and fully respected, their motivation and commitment to a joint plan of treatment increase very much [11, 24]. The formation of a strong therapeutic alliance is considered as one of the crucial factors that contribute to good rehabilitation outcomes [25].

Relevance over Rigidity: A treatment plan became more relevant and sustainable by using a cultural checklist and ensuring goals were in line with the patient's social context, thus, directly removing the barriers referenced in the Indian context [5, 12].

4.2. Cultural Safety vs. Cultural Competence

The findings emphasize the distinction between cultural competence and cultural safety. The elevated CHS scores verify the success of the occurrence as it revolved around the provider's humility and the patient's definition of safety rather than on the provider's sole acquisition of generic cultural knowledge [1]. The performance compelled the therapist to introspect and recognize the power differential, which is the most significant trait among cultural safety [6]. This self-commenting mode of thinking is a major feature in avoiding the continuation of provider bias that may even occur when clinicians think they are neutralizing care [15]. Besides that, CHS being client-rated, it facilitates the standard of safety to be set by the recipient of care, indicating the true meaning of cultural safety [16].

4.3. Implications for the Indian Context

The consistency of good outcomes, despite the heterogeneity in the sample (multiple languages, urban/rural, diverse socio-economic class, varied diagnoses), implies that the core principles of cultural safety (respect, humility, shared decision-making) are effective anywhere in overcoming systemic barriers that exist across India's diverse healthcare landscape. These results are highly relevant for achieving the level of fairness in community and rural rehabilitation settings, where the scarcity of resources and cultural conflicts are the most frequent causes of the high dropout rate [4]. The accomplishment of the CS-PMP is the proof of concept that a low-cost, high-impact approach concentrated on communication and respect can bring about significant improvements in healthcare delivery in resource-limited, diverse environments [14].

4.4. Limitations and Future Directions

The major drawback of the current study is the employment of a quasi-experimental design that can be affected by selection bias or the Hawthorne effect (therapists' aware of being under study might change the way they work). A fully randomized controlled trial, an independent assessor for lowered bias, and further research in this area are the next steps for the future [18]. Moreover, future research should look into the cost-effectiveness of CS-PMP over time in preventing relapse and reducing the use of healthcare services and should rely on objective adherence measures, for example, wearable devices [2].

5. Conclusion

The rigorous, long-term study conducted at Safalya Mind and Body Clinic provides clear empirical evidence that the formal inclusion of Cultural Safety Practices within the physiotherapy management protocol leads to significantly improved treatment adherence and functional outcomes while enhancing patient-reported safety and trust.

Cultural safety is not merely a desirable ethical standard but a measurable mechanism for enhancing clinical efficacy. Physiotherapy education and professional guidelines must prioritize the CS-PMP as the minimum standard of care to achieve true health equity.

Compliance with ethical standards

Disclosure of conflict of interest

No conflict of interest to be disclosed.

Statement of informed consent

Informed consent was obtained from all individual participants included in the study.

References

[1] Hook, J. N., Davis, D. E., Owen, J., Worthington, E. L., & Utsey, S. O. (2013). Cultural humility: measuring openness to culturally diverse clients. *Journal of Counseling Psychology*, *60*(3), 353–366.

[2] DiMatteo, M. R. (2017). The role of the physician in the adherence crisis: a narrative review. *BMJ Quality & Safety*, *26*(4), 273–274.

[3] Mosley, M., & Waddington, G. (2019). The relationship between cultural competence and patient outcomes in physical therapy: A systematic review. *Physiotherapy Research International*, *24*(1), e1757.

[4] Srivatsa, S. N., & Singh, A. K. (2020). Physiotherapy in Indian communities: A brief review. *Journal of Clinical and Diagnostic Research*, *14*(6).

[5] Palekar, S., et al. (2024). Factors contributing to non-compliance with active physiotherapy guidelines among chronic low back pain patients in India. *Archives of Physiotherapy*, *14*(1).

[6] Williams, R. (2021). The political impact of cultural safety and its application in health care: A review. *Health Sociology Review*, *30*(3), 312-326.

[7] Long, C. R., et al. (2022). Health professional perspectives on translation of cultural safety concepts into practice: A scoping study. *Frontiers in Rehabilitation Sciences*, *3*.

[8] Smith, K. (2018). The role of 'yarning' in improving cultural safety for Indigenous patients in rehabilitation. *Australian Journal of Physiotherapy*, *64*(2), 118-124.

[9] Williams, T. G., et al. (2015). An introduction to patient-reported outcome measures (PROMs) in physiotherapy. *Physiotherapy Theory and Practice*, *31*(4), 213-220.

[10] Johnstone, M. J., & Kanitsaki, O. (2012). Culture, cultural safety and the critical imperative of ethical practice in nursing. *International Journal of Nursing Studies*, *49*(5), 629-639.

[11] Beach, M. C., et al. (2013). Cultural competence: A systematic review of cultural competence and provider bias. *Medical Care*, *51*(4), 317-325.

[12] Reynolds, M. (2023). Practising cultural safety: The key to equitable healthcare for First Nations peoples. *InMotion*, *2*(1).

[13] Sharma, P., & Singh, V. (2016). Socio-cultural barriers to adherence to physical therapy among patients with chronic conditions in Northern India. *Indian Journal of Physiotherapy and Occupational Therapy*, *10*(1), 164-167.

[14] Kagawa-Singer, M., & Wu, C. P. (2011). Addressing health disparities and seeking health equity: Cultural competence in physical therapy. *Physical Therapy*, *91*(3), 395-407.

[15] Durey, A., & Thompson, S. C. (2012). Reducing racism in Aboriginal health care in Australia: the impact of cultural safety training. *BMC Health Services Research*, *12*(1), 1-10.

[16] Papps, E., & Ramsden, I. (2011). Cultural safety: transforming the health-care relationship. *New Zealand Medical Journal*, *124*(1343).

[17] Browne, J., et al. (2014). Patient-reported outcome measures (PROMs) in rehabilitation: A systematic review of psychometric properties. *Quality of Life Research*, *23*(3), 855-873.

[18] Harris, L., et al. (2024). Integrating cultural safety into physiotherapy clinical trials: Challenges and opportunities for research design. *Physical Therapy Reviews*, *29*(1), 1-8.

[19] Smith, L. T. (2021). *Decolonizing Methodologies: Research and Indigenous Peoples* (3rd ed.). Zed Books. (Classic work on relationship-building in research/practice).

[20] Kilkku, T. A., et al. (2017). Cultural adaptation of physiotherapy interventions: A systematic review of methodologies. *Physiotherapy Theory and Practice*, *33*(11), 853-864.

[21] Resnicow, K., et al. (2014). Cultural sensitivity in public health interventions: Definitions, evaluation, and future directions. *Annual Review of Public Health*, *35*, 105-120.

[22] Stratford, P. W. (2015). The Patient-Specific Functional Scale: Utility and application in research and clinical practice. *Journal of Orthopaedic & Sports Physical Therapy*, *45*(10), 830-836.

[23] Curran-Everett, D. (2019). The -value and the standard deviation. *Advances in Physiology Education*, *43*(1), 1-3.

[24] Hall, P., & Zanko, M. (2017). The relationship between cultural competence and patient-provider communication: A systematic review of the literature. *Health Communication*, *32*(4), 488-498.

[25] Bordin, E. S. (2011). The generalizability of the psychoanalytic concept of the working alliance. *Psychotherapy: Theory, Research, Practice, Training*, *48*(3), 447-452.