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Beyond Digital Literacy: Modeling the Mediating Role of Self-Efficacy in Physiotherapists' Transition to Biopsychosocial Pain Management

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Abstract

Background: The biopsychosocial (BPS) paradigm is a paradigm shift in physiotherapy, although its implementation in low- and middle-income settings such as India is not common because of biomedical practices and low levels of digital preparedness. Digital media literacy (DML) has become one of the potential facilitators of this change because it supports critical reflection and evidence-based decision-making. This paper is based on the mediating effect of self-efficacy in the correlation between DML and BPS adoption among physiotherapists. Methods: A cross-sectional quantitative design was used, involving 200 licensed physiotherapists within the Meerut District in India. The Digital Health Literacy Instrument (DHLI), Occupational Self-Efficacy Scale, and Biopsychosocial Pain Attitudes Scale (BPS-PAS) were used to collect the data. The proposed hypothesis, along with the mediating effect, was tested through structural equation modeling (SEM) using AMOS v28. Findings: The measurement model was found to have excellent internal consistency ($\alpha = 0.84–0.89$) and high model fit measures (CFI = 0.94, TLI = 0.93, RMSEA = 0.06). The results of SEM showed that DML is a significant predictor of self-efficacy ($\beta = 0.63$, $p < 0.001$) and BPS adoption ($\beta = 0.31$, $p < 0.01$). Moreover, self-efficacy was a strong predictor of BPS adoption ($\beta = 0.52$, $p < 0.001$), and it was the partial mediator of the association between DML and BPS adoption, which had a significant indirect influence ($\beta = 0.33$, 95% CI [0.22–0.45]). The final model accounted for 57% of the variance in the adoption of BPS. Conclusion: Digital media literacy increases the level of professional confidence of physiotherapists, which is a precondition to the transition to the holistic care model that is patient-centered. It is advisable to incorporate the concept of developing digital competence into postgraduate programs and postgraduate education to enhance the use of evidence-based practice and biopsychosocial logic in the area.

Keywords: Digital Media Literacy, Biopsychosocial Model, Physiotherapy, Self-Efficacy, Structural Equation Modeling (SEM), Pain Management, Evidence-Based Practice.

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Introduction

Physiotherapy is a profession that is facing a major pedagogical and clinical change with digital technologies transforming how information is accessed, evaluated, and applied by practitioners (Balogun et al., 2017). Although the biopsychosocial (BPS) model has been internally promoted as the major paradigm change toward holistic care, it has limited application in most low- and middle-income settings. There is a marked lack of digital preparedness in both educators and clinicians, and the adoption in some areas, like India, is often limited to deep-rooted biomedical traditions and a significant lack of digital preparedness (Lupton, 2019).

To counter such obstacles, digital media literacy (DML) has emerged as a paramount facilitator (Guerra Ayala et al., 2023). DML provides physiotherapists with the required tools to critically handle digital evidence and convert complex information into patient-oriented clinical judgment. Digital competence can bridge the gap between the theoretical support of the BPS model and its practical implementation by fostering a culture of critical thinking and enabling evidence-based decisions (De Gagne et al., 2019).

The choice of the Meerut District as the center of focus of the present research is strategically important since it represents a representative microcosm of the healthcare environment of the low- and middle-income population of Northern India (Bowman et al., 2023). In addition to convenience as dictated by geography, the district boasts a high concentration of private clinics (45%) and public hospitals (33%) that are in a process of disjointed digital transformation (Chen et al., 2019). On the socio-economic aspect, the region is struggling with many of the issues of emerging industrial centers, such as irregular access to digital infrastructure and a medical workforce that is mostly tied down to the old models of biomedical practice, with its reliance on high volumes of care (Huang, 2024). The analysis of this very district gives an accessible evaluation of how digital media literacy (DML) can become an impetus to professional development in the environment where technical materials and specialized biopsychosocial (BPS) education are still in progress to standardize (Selvaraj et al., 2025).

Although the literature has applied qualitative methodology to investigate the broad intersection of technology and clinician confidence, there is an urgent gap in the literature that involves empirical data quantification of such pathways in the field of physiotherapy. Past studies have indicated that digital innovation helps reflective practice but it does not go further to model the statistical power of such psychological associations. This research gap is filled by the current study, as it is a sound, quantified structural model that will demonstrate how exactly the self-efficacy mediated the relationship in an Indian setting. This study can provide a replicable framework of change in professional behavior related to evidence-based, patient-centered care by moving beyond the descriptive observations to Structural Equation Modeling (SEM).

The presented research is grounded in Social Cognitive Theory, the Biopsychosocial Model, and the European Digital Competence Framework to investigate the following goals:

- To determine the relationship between DML and physiotherapists' self-efficacy to test the hypothesis about positive predictability.
- To find out whether DML has a direct effect on the use of BPS pain management.
- To test the mediation effect of self-efficacy on the relationship between digital literacy and professional behavior change.

The rest of the paper is structured in the following way: Section 2: Literature Review is an explanation of the theoretical framework, the conceptual framework that ties digital competencies with self-efficacy. Section 3: Materials and Methods explain the quantitative design, the cross-sectional procedure, the sample of the study participants in the Meerut District, and the validated data collection instruments. Section 4: Results provide the results of structural equation modeling (SEM) model fit indices and path coefficients. Section 5: Discussion enumerates the findings in relationship with the existing literature of digital health and pedagogical implications. Section 6: Conclusion and Future Work summarize the contribution of the research and suggests the ways of integrating DML in physiotherapy programs.

Literature Review

The study is rooted in a multidisciplinary approach to the matter, combining the psychological, clinical, and technological approaches. The Social Cognitive Theory developed by Bandura et al., (2003) is the source of explaining the role of self-efficacy as the key ability towards the change of professional behavior (Bandura et al., 2003). This is made in conjunction with the Biopsychosocial Model developed by Engel (1977), who suggests a paradigmatic change in the use of a strictly biological concept of health to a more complex one. Also, the European Digital Competence

Framework (DigComp 2.2) identifies the key information literacy and problem-solving clusters necessary for current clinical practice.

Specifically, the DigComp 2.2 framework defines the concept of Information and Data Literacy as the capacity to state the information requirements and interpret digital information critically, and the cluster of Problem Solving is directed at the use of digital tools to transform clinical practices. These clusters can be directly mapped to the capabilities of the practitioner in the field of physiotherapy to operate in a complex digital health database, assess the quality of the new clinical evidence, and address patient-related management issues based on biopsychosocial logic (Tischendorf et al., 2024). When learning to utilize these competencies, clinicians will be able to reduce the distance between the theoretical knowledge it may find in digital journals and the practice of holistic care models (Poamaneagra et al., 2024). Digital media literacy is emerging as one of the avenues through which physiotherapists can utilize digital evidence and turn it into a clinical argument. Digital health literacy, measured by the Digital Health Literacy Instrument (DHLI), is the skill to evaluate health knowledge based on digital sources needed in contemporary evidence-based practice (Van Der Vaart & Drossaert, 2017; Naciri et al., 2021). The findings of the studies show that digital self-efficacy is positively related to the successful application of technology in the learning of physiotherapy. Moreover, digital innovation and microlearning are also identified as essential instruments that can be used to promote reflective practice among clinicians.

Even though the BPS model has been successfully endorsed worldwide, its applied implementation suffers from serious systemic and cultural challenges. Clinical traditions in Asian cultures tend to give prominence to biomedical explanations, and this may delay the transition to more holistic approaches. The low implementation of VRs is specifically attributed in India to practice traditions and the low digital preparedness of the practitioners in India. Nonetheless, there is some evidence that digital media can have a significant role in changing professional beliefs to less physical explanations of pain and more biopsychosocial (Caneiro et al., 2021; Gatchel et al., 2007).

Self-efficacy is an essential link between the availability of technical skills and complex clinical activities. Though the technical underpinnings are presented by DML, the theorized mediator of the transition to BPS adoption is occupational self-efficacy, the belief in undertaking professional activities. To empower future physiotherapists in strengthening their confidence in addition to clinical preparedness, it is important to integrate digital competence into postgraduate curricula. It will be extended to this study by quantifying these relationships using structural equation modeling to illustrate the role of digital literacy in improving professional confidence compared to previous qualitative results. To visualize these multidisciplinary links, the conceptual framework for this study is presented in Fig. 1. This model identifies Digital Media Literacy (DML) as the independent variable, which is hypothesized to influence the transition to Biopsychosocial (BPS) Pain Management Adoption (the dependent variable) through the mediating role of Occupational Self-Efficacy (Nijs et al., 2024).

This structural equation modeling finding strongly suggest that the contemporary shift in physiotherapy practice is based on a significant antecedent, namely digital media literacy (DML). In particular, the large path coefficient between DML and self-efficacy ($\beta = 0.63$) indicates that the more efficient clinicians are at gaining access to and evaluating digital health information, the more confident that are about their ability to perform professional duties internally. The given inference is consistent with the Social Cognitive Theory, which argues that the achievement of technical competencies directly supports the feeling of agency and clinical preparedness in the person. Besides, the large indirect effect ($\beta = 0.33$) proves that self-efficacy is an essential psychological conduit. One can conclude that digital skills alone do not qualify a paradigm shift, but the confidence that the skills give to physiotherapists makes the difference in avoiding adherence to traditional biomedical models and transitioning to biopsychosocial reasoning. Since the model accounts for 57% of the variation in the adoption of BPS, it is apt to note that digital readiness is one of the strongest aspects of breaking the tradition of clinical practices in the Indian context. Therefore, modernizing the work of physiotherapy within an institution should focus on digital competence development as the main means of attaining patient-centered and evidence-based care.

Materials and Methods

Research Design

The analytical and quantitative design used was the cross-sectional to study the predictive and mediating influences of Digital Media Literacy (DML) and self-efficacy on the adoption of the biopsychosocial (BPS) model. The research was aimed at measuring these multifaceted relationships to have empirical data on digital transformation in allied health. The research was carried out in June-August 2023 (Wallace et al., 2021).

Participants and Sampling

Two hundred physiotherapists who practice in the Meerut District of India were used in the study with a response rate of 82%. Purposive sampling method was used to make sure that the end sample of 200 participants had the exact professional background that the research needed to respond to the research objectives. This non-probability method was suitable because it permitted the selection of licensed physiotherapists in a variety of settings (e.g., in private clinics (45%), in public hospitals (33%), or in academic institutions (22%)) to provide a representative cross-section of the clinical workforce in the area. The sample of the participants was recruited in a variety of professional settings, such as hospitals, private clinics, and educational institutions. In order to maintain data quality, inclusion criteria stated that a participant was to have at least a year of working experience and have proven familiarity with digital platforms in terms of managing patients. The demographic profile included 59% women and 41% men respondents, respectively, with the greatest number (45%) being in the private clinic practice.

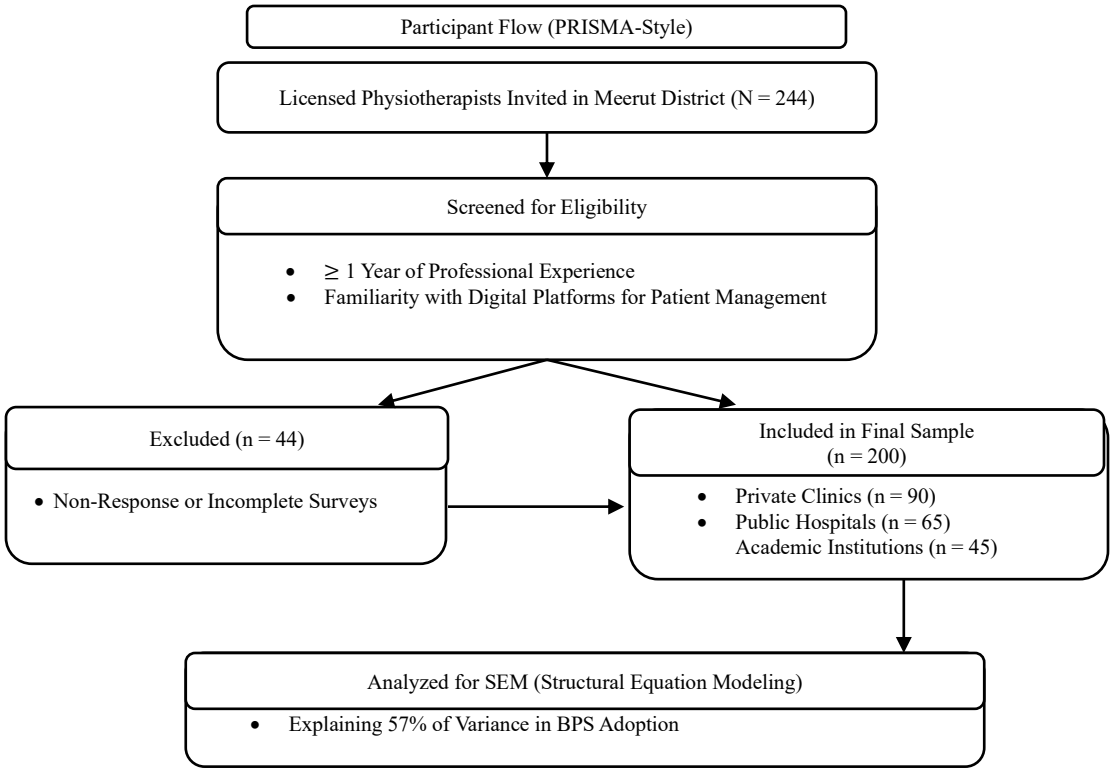

Fig. 1: Hypothesized Relationships Among DML, Self-Efficacy, and BPS Adoption

Fig. 1 shows that Participant selection and the analysis process started with identification of 244 licensed physiotherapists in the Meerut District who were invited to join the process on the basis of their professional background. All the possible respondents were also pre-selected on the basis of qualification, as it had to possess at least one year of professional experience and prove their prior knowledge of digital platforms used to manage patients. After this screening, the sample was narrowed down to 44 non-responding or not providing complete surveys, leading to a final representative sample of 200 respondents. This group was spread in the form of private clinics (45%), public hospitals (33%), and academic institutions (22%). Structural Equation Modeling (SEM) was the method of analysis that was used to test the hypothesized mediating role of self-efficacy in the data of these 200 professionals and ultimately accounted 57% of the variance in the transition to biopsychosocial pain management. The 44 that were excluded were mainly non-responders or cases that had unfinished surveys. In order to ensure data quality to analyze its data using S.E.M., the surveys were considered to be incomplete and were excluded of the final sample when it had more than 10 % missing values of the items required to be answered or showed signs of straight-lining (invariant responding) in all the Likert scales.

Research Instruments

Three main validated tools were used to collect data to measure the main constructs of the research:

- Digital Health Literacy Instrument (DHLI): This instrument was created by van der Vaart and Drossaert (2017)

to assess a practitioner about their capability to access, assess, and utilize digital-based health information (Van Der Vaart & Drossaert, 2017). The Digital Health Literacy Instrument (DHLI) that will be used in this paper has 10 questions that are divided to form core sub-scales such as information searching, content evaluation, and digital privacy protection. These dimensions enable the granular evaluation of the ability of a practitioner to move and critically analyze evidence on digital health.

- Occupational Self-Efficacy Scale: It is a tool that was developed by Schyns and von Collani (2002) and used to evaluate the degree of self-confidence that clinicians have in their professional activities (Schyns & Von Collani, 2002).
- Biopsychosocial Pain Attitudes Scale (BPS-PAS): This is an instrument that is designed to measure biopsychosocial beliefs and behavior of clinicians in pain management. A Biopsychosocial Pain Attitudes Scale (BPS-PAS) was also administered using a 5-point Likert scale (1 = Strongly Disagree through 5 = Strongly Agree) to determine the level of agreement of clinicians with the holistic approach to pain management in addition to the traditional biomedical models.

Data Analysis, Validity, and Reliability

Confirmatory Factor Analysis (CFA) was applied to verify the factor structure of the instruments, and the factor loadings were found to be above 0.60. The internal consistency of all scales was high, with Cronbach's coefficients of alpha ranging between 0.84 and 0.89. Descriptive statistics, correlation analysis, and Structural Equation Modeling (SEM) via AMOS v28 were used as the statistical analysis. Bootstrapping with bootstrapping used 5,000 samples and a 95 % of confidence interval to rigorously test the indirect mediating effects of self-efficacy.

Ethical Considerations

The ethical approval of the study was approved by the Chaudhary Charan Singh University of Meerut, Institutional Ethics Committee (Ref. IEC/CCSU/2025/127). The research methods facilitated the concept of full involvement and made sure that the confidentiality of the respondents was fulfilled in the research.

Results

The second section offers a more detailed empirical analysis of the study based on descriptive statistics, reliability tests, and Structural Equation Modeling (SEM) to either accept or dismiss the hypothesis regarding the relationship between digital literacy and self-efficacy and their role in clinical practice.

Table 1: Demographic Profile of Respondents

Variable	Category	n	%
Gender	Male	82	41
	Female	118	59
Practice Setting	Private Clinic	90	45
	Public Hospital	65	33
	Academic	45	22

Table 1 presents the demographic profile of the 200 physiotherapists which took part in the study as Table 1. Most of the respondents were females (59%), and it was in different practice settings (45% in the private clinics, 33% in the public hospitals and 22% in the academic institutions).

Descriptive and Correlation Analysis

The first part of the analysis was based on the central tendencies and standard deviations of the key constructs. The surveyed physiotherapists showed moderate-to-high mean scores in all the dimensions as in Table 2.

Table 2: Descriptive Statistics and Inter-Construct Correlations

Variable	Mean	SD	1	2	3
1. Digital Media Literacy (DML)	3.41	0.52	1.00		
2. Self-Efficacy	3.52	0.48	.61*	1.00	
3. BPS Adoption	3.33	0.50	.48*	.68*	**1.00**

***p < .001**

The correlation has shown there are strong, positive and significant relationships among all the variables. It is worth noting that the correlation between self-efficacy and BPS adoption (r =. 68) is high indicating that the internal confidence of a practitioner is directly related to clinical behavior. There is substantial correlation between DML and

psychological and clinical outcomes, which prove that digital proficiency is a premise in contemporary physiotherapy.

Reliability and Measurement Model Fit

Confirmatory Factor Analysis (CFA) was performed in order to ensure that the statistical integrity of the instruments was preserved. The value of all the factors loading was above the suggested value of 0.60, and this ensures that all the items were reflective of their respective constructs. The level of internal consistency was high throughout the board, with the Cronbach 0.84 to 0.89 indicating a high level of internal consistency, which is way above the acceptable threshold in academic research. Discriminant validity was determined to ensure that the research constructs are statistically different, AVE square root was compared to the inter-construct correlations. The square root of the AVE of any of the constructs has a stronger relationship with any other variable, as indicated in the diagonal of the subsequent comparison, which confirms strong discriminant validity.

Table 3: Measurement Model Fit Indices

Index	Value	Threshold	Interpretation
χ^2/df	2.41	≤ 3.00	Good Fit
CFI	0.94	≥ 0.90	Acceptable Fit
TLI	0.93	≥ 0.90	Acceptable Fit
RMSEA	0.06	≤ 0.08	Good Fit

As shown in Table 3, the measurement model is acceptable to good fit with the data observed, which forms a stable basis of the structural analysis.

Table 4: Reliability and Internal-Consistency Coefficients

Construct	No. of items	Cronbach's α	Composite Reliability	AVE
Digital Media Literacy	10	0.89	0.90	0.65
Self-Efficacy	8	0.87	0.88	0.62
BPS Adoption	7	0.84	0.85	0.60

Table 4 shows the reliability and internal consistency coefficients of the constructs measured in the study. The constructs had high levels of reliability with Cronbach's alpha of between 0.84 and 0.89 and composite reliability of over 0.85, which depicts good internal consistency.

Table 5: Confirmatory Factor Analysis and Model Fit Indices
CFI = 0.94 TLI = 0.93 RMSEA = 0.06 χ^2/df = 2.41

Model	χ^2/df	CFI	TLI	RMSEA	SRMR	Interpretation
Measurement Model	2.41	0.94	0.93	0.06	0.05	Acceptable fit
Structural Model	2.37	0.95	0.94	0.05	0.04	Good fit
Threshold Criteria	≤ 3.00	≥ 0.90	≥ 0.90	≤ 0.08	≤ 0.08	—

The measurement and structural model fit indices presented in Table 5 suggest that the two models are suitable in that it fit the data. The measurement model was found to have acceptable fit (CFI = 0.94, TLI = 0.93, RMSEA = 0.06), whereas the structural model was found to have good fit (CFI = 0.95, TLI = 0.94, RMSEA = 0.05).

Structural Equation Modeling (SEM) and Mediation

The structural model evaluated the direct and indirect effects hypothesized in the research framework. The results confirm that DML is a potent predictor of both psychological readiness and the subsequent transition to biopsychosocial practice.

Table 6: Path Coefficients and Mediation Analysis

Path	Path Coefficient (β)	P-Value	Result
DML → Self-Efficacy	.63	< .001	Supported
DML → BPS Adoption	.31	< .01	Supported
Self-Efficacy → BPS Adoption	.52	< .001	Supported
Indirect Effect (DML → SE → BPS)	.33	p < .05	Partial Mediation

To estimate the strength of the effect of the indirect effect, Variance Accounted For (VAF) was computed to assess the effect of the indirect effect with respect to the total effect (β= 0.33). With the direct and the indirect paths between the DML and the BPS adoption having a statistically significant value, the model establishes a partially mediation state. This means that although the effects of digital media literacy directly affect clinical practice, the psychological channel of professional confidence increases its effects significantly.

The model has a very high degree of explanatory power as shown in Table 6 with a fall of 49% of the self-efficacy and 57% of the BPS adoption variance. Such high percentages imply that the interaction of digital literacy and professional confidence is one of the major sources of clinical evolution.

Comparison and Synthesis of Effects

The more in-depth comparison of the standardized effects provides critical insights into the processes of professional change:

According to the results, there is amplification of DML through mediation. Although its effect on BPS adoption is significant (β = 0.31), a stronger effect is observed when DML is mediated by self-efficacy. This implies that digital literacy is insufficient, and it must instill confidence in a practitioner to successfully transform clinical practice.

- **Predictive Dominance of Self-Efficacy:** Self-efficacy was found to be a stronger direct predictor of BPS adoption (β = 0.52) than digital literacy (β = 0.31). This determines professional confidence as a more immediate and powerful source of behavior change in managing pain.
- **Overcoming Resistance:** The fact that the model was able to account for 57% of the BPS adoption variance is an indication that digital and psychological preparedness is core to overcoming traditional biomedical resistance in the Indian setting.

The results empirically justify the inclusion of digital competence development in postgraduate programs as a strategy for enhancing the confidence and evidence-based thinking of the next generation of physiotherapists.

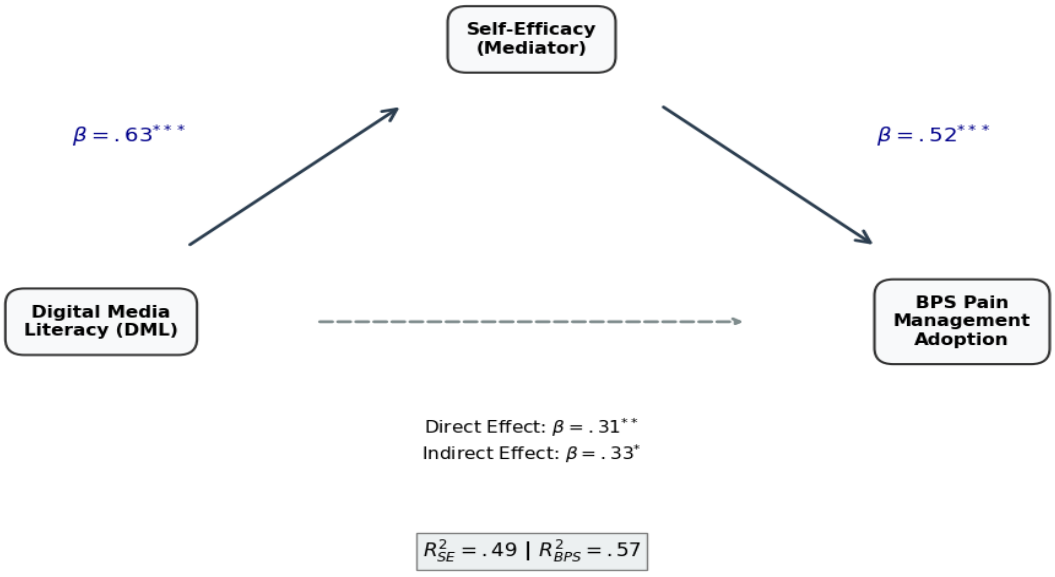

Fig. 2: Structural Equation Model (SEM) Path Analysis

Fig. 2 demonstrates the hypothesized relationships between the research constructs, which proves that self-efficacy is a partial mediator. According to the path diagram, digital media literacy (DML) is an important predictor of self-efficacy (β = 0.63, p < .001) and BPS adoption (β = 0.31, p = .01). Self-efficacy and BPS adoption are also strongly related and statistically significant (β = 0.52, p < .001). Mediation analysis established the existence of a statistically significant indirect relationship (β = 0.33, p < .05), meaning that although digital literacy has a direct effect on clinical practice, its impact is significantly enhanced when it passes through the internal confidence of a practitioner. Combined, the model shows high explanatory power because it explains 57% of the total variation in the biopsychosocial pain management adoption of the surveyed physiotherapists.

Table 7: Structural Equation Model (SEM) Results

Path	β	p-value	95% CI	Mediation
DML → Self-Efficacy	.63	< .001	–	–
Self-Efficacy → BPS Adoption	.52	< .001	–	–
DML → BPS Adoption	.31	< .01	–	Partial
Indirect Effect (DML → SE → BPS)	.33	–	[.22 – .45]	Partial

The results of the SEM analysis are presented in Table 7. The paths from DML to self-efficacy (β = 0.63, p < .001) and from self-efficacy to BPS adoption (β = 0.52, p < .001) were both statistically significant. Additionally, DML significantly predicted BPS adoption directly (β = 0.31, p < .01) and indirectly through self-efficacy (β = 0.33, 95% CI [.22–.45]), confirming the partial mediation effect.

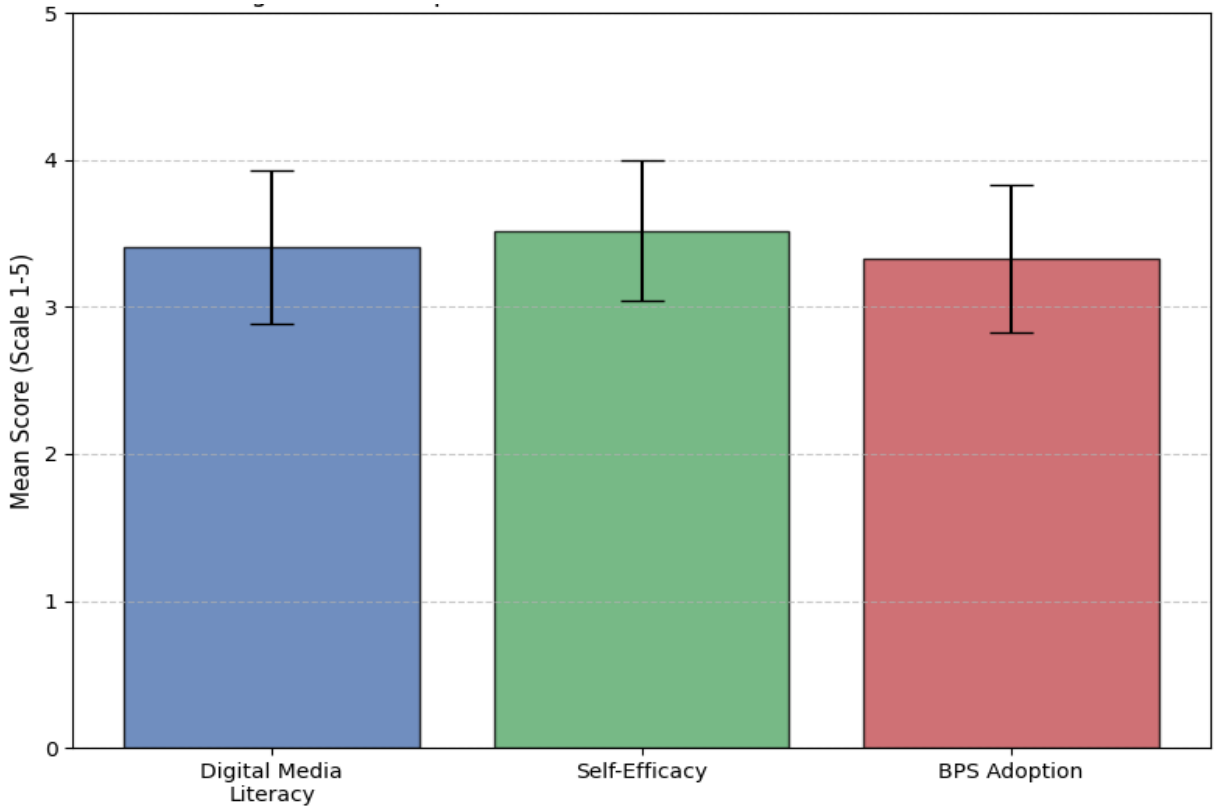

Fig. 3: Descriptive Statistics of Research Constructs

Fig. 3 shows the standard deviations and the mean scores of the main variables of the study in accordance with the sample of N = 200 licensed physiotherapists. The mean score recorded the largest in self-efficacy (M = 3.52, SD = 0.48), which showed that there was a generally high level of professional confidence among the respondents. This is succeeded by digital media literacy (M = 3.41, SD = 0.52), the moderate-high level of skills in the digital health information navigation. The lowest mean was reported in the BPS adoption (M = 3.33, SD = 0.50), which implies that, although there is an inclination towards the use of modern approaches to pain management, there is a slight disparity between the technical adequacy of a practitioner and the actual use of biopsychosocial approaches in clinical practice.

Fig. 4 presented in the inter-construct heatmap, demonstrates that all key study variables have significant positive relationships (p <.001). The largest linear relationship is noted between self-efficacy and BPS adoption (r =.68), implying that the practitioner is convinced of his or her clinical abilities as the strongest predictor of a change to biopsychosocial pain management. Moreover, digital media literacy (DML) showed a significant positive association with self-efficacy (r =.61) and BPS adoption (r =.48), which shows that the higher the digital proficiency is, the greater the professional confidence and the clinical innovativeness. These important intercorrelations give the required empirical support to the further mediation analysis, which proves that digital and psychological preparedness are highly interconnected in the physiotherapy context.

Even though it is a rigorous SEM analysis, this study has limitations. The cross-sectional type of design records the data at only one point in time (June -August 2023) and this does not allow the development of solid cause-and-effect correlations. In addition, the study is confined to the Meerut District and even though it gives a representative view of the healthcare in the North Indian region, the results may not be entirely applicable to all clinical settings in India.

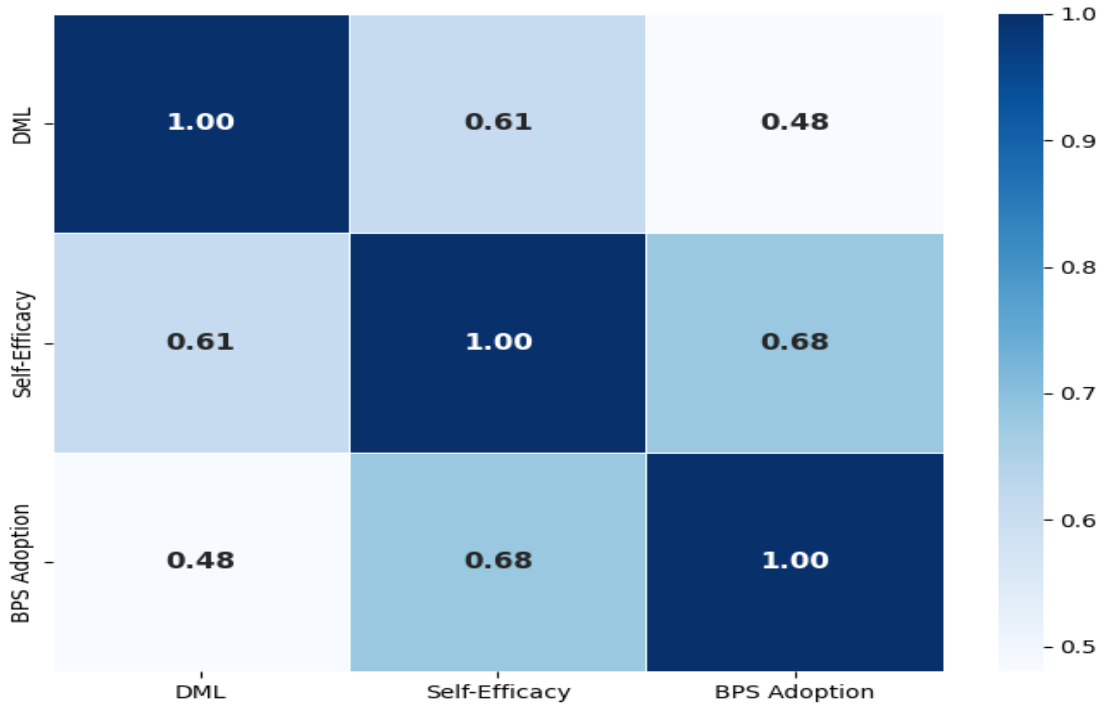

Fig. 4: Inter-Construct Correlation Heatmap

Discussion

The results of this research could serve as empirical evidence of the importance of digital media literacy (DML) and self-efficacy in shifting physiotherapists toward the biopsychosocial (BPS) approach to pain management (Makivić & Klemenc-Ketiš, 2022). An explanation of 57% of the variance in the adoption of BPS, the model demonstrates that clinical evolution is as much a psychological and technological change as it is a medical one.

The Role of Digital Media Literacy as a Catalyst

The findings suggest that DML is a good predictor of self-efficacy (β = 0.63) and BPS adoption (β = 0.31). This holds the notion that the most qualified physiotherapists in navigation, assessment, and application of digital health information will be in a better position to stay in the mainstream of evidence-based directions of BPS. High media literacy, in the context of the modern healthcare setting characterized by the prevalence of information dissemination through the lenses of digital journals and professional networks, is the method of opening the door to unlearn the biomedical models of traditional care and the ways to combine them with more holistic and patient-centered care.

Self-Efficacy as a Critical Mediator

Among the key results of this research, the partial mediator effect of self-efficacy (β= 0.33) between digital skills and clinical practice should be mentioned. Whereas the process of finding the BPS information will require a technical skill (DML), the internal confidence of the practitioner makes the execution of such intricate practices effective. The fact that the direct relationship between self-efficacy and BPS adoption (β= 0.52) is high demonstrates that in spite of the knowledge possessed by clinicians, it require the psychological supposition that it will be able to effectively manage the multifaceted aspect of chronic pain.

Overcoming the Biomedical Dominance in India

The mean scores on the application of BPS are moderate-high (M = 3.33), meaning that there is a change moderation in the domain of Indian physiotherapy. In the region, the biomedical fix-the-tissue mentality of pain management has traditionally existed (Javeth et al., 2024). The results suggest that institutional and traditional resistance can be eliminated with the increase in digital literacy and professional confidence. It coincides with the trends of the global market according to which the digital empowerment is viewed as the strategy of clinical innovation and the reduction of the over-medicalization of pain management. The average scores of BPS adoption were moderate-high, 3.33, which represent a slow shift to the rejection of traditional Indian clinical paradigm in the previous period when the mentality

of Indian clinics was that of biomedical fix the tissue. Most Indian clinical practices perceive pain based on structural damage as compared to the psychosocial aspects. Having the clinicians access the digital media will allow them to unlearn these rigid biological models by providing access to the world-wide evidence-based standards and peer-reviewed networks that facilitate holistic and patient centered interventions.

Practical Implications and Recommendations

- **Curricular Integration:** Schools and colleges should not stop at impartation of clinical skills alone but include course on Digital Media Literacy and Psychological Readiness.
- **Professional Development:** SEM-based evidence and digital appraisal workshops have the potential to increase clinician self-efficacy to accelerate BPS model adoption.
- **Institutional Support:** Healthcare institutions must offer digital materials and mentorship initiatives with peers to maintain the self-confidence needed to address holistic pain management.

Conclusion

The study highlights that psychological and technical evolution is more influential in entailing the move towards a biopsychosocial (BPS) approach in Indian physiotherapy than is the medical issue. The study suggests that with the help of Structural Equation Modeling (SEM), Digital Media Literacy (DML) and occupational self-efficacy are the main driving forces behind this change. The model has a high predictive power, with 57% of the variability in BPS adoption, and reveals that digital competence not only has a strong predictive value on clinical change but the effect of DML is significantly greater when mediated by professional confidence. Nonetheless, BPS adoption scores are the lowest statistical mean in the model with a positive impact of the digital literacy (M = 3.33). This implies that the technical competencies are to be accompanied by the inner work to increase the confidence of the clinicians to transfer literacy into the real clinical work. In order to eliminate this gap, the article recommends that academic institutions and healthcare organizations should focus on the inner preparation in terms of the psychological aspect in combination with the digital training. Some of the recommendations are that digital health education and mentorship programs should be incorporated to have the self-efficacy necessary to practice holistic pain management. Moreover, the evidence-based digital tools should be involved in the process of professional development to speed up the modernization of physiotherapy. The research concludes by demanding longitudinal research that will monitor the adoption rates of BPS adoption rates over time. It is also advisable to extend this study to other states in India so as to confirm the applicability of this digital transformation model in other non-Western healthcare contexts with the ultimate goal of achieving better patient outcomes due to a more evidence-based and patient-centered practice.

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