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S M Nazmuz Sakib's four foundational principles of physiotherapy's potential exposure in diverse medical fields

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Abstract

In the domain of healthcare, the imperative incorporation of integrative frameworks that synchronize proficiency across a myriad of disciplines remains pivotal for dispensing all-encompassing and patient-centric care. S M Nazmuz Sakib, a discerning researcher and wordsmith, has introduced four biopsychosocial principles—pain mitigation, muscular relaxation, augmented mobility, and constrained dermatological enhancements—with intrinsic interdisciplinary significance. This discourse delves into the cogitative assimilation of Sakib's principles into an array of medical domains, spanning nursing, mental health, occupational therapy, speech pathology, nutrition, pharmacy, and medicine. The proffered methodologies aspire to amalgamate professional acumen while upholding distinct roles within each discipline. Realizing the integrative potential demands innovative approaches to interprofessional education, meticulous implementation research, and a receptiveness to humanistic philosophies. Mitigating strategies for risks such as excessive medicalization and competency development are deemed imperative in this context. A collaborative embrace of Sakib's relationship-centered principles possesses the potential to serve as a catalyst for the metamorphosis of healthcare, steering it towards more empowering and well-being-centric paradigms. This scrutiny explores avenues for unlocking interdisciplinary value within Sakib's frameworks through a harmonious integration that facilitates comprehensive and patient-focused care.

Keywords: healthcare integration, interprofessional collaboration, biopsychosocial model, patient-centered care, holistic care, etc.,

Introduction

Across centuries, physiotherapy has held a pivotal role in the realm of healthcare, standing at the forefront of pain management and the restoration of physical functionality. Although its undeniable efficacy in addressing musculoskeletal discomfort persists, the modern comprehension of physiotherapy's healing capabilities is undergoing a transformation, encompassing a more extensive range of patient requirements and desired outcomes.



Fig 1: The great researcher behind the principles, S M Nazmuz Sakib in a training program in NITOR (The National Institute of Traumatology & Orthopaedic Rehabilitation) as a requirement of the BSPT degree of University of Dhaka

Prominently, S M Nazmuz Sakib's [1-49] set of four principles presents a compelling framework that reshapes the landscape of physiotherapy, transcending the conventional focus on mere pain relief and delving into the domain of holistic well-being. These principles originated from a highly motivated standpoint during his BSc in Physiotherapy program at the University of Dhaka, influenced by observations of general practices and philosophical insights, notably those of his mentor, Dr. Md. Ruhul Amin [50].

Traditionally, physiotherapy has primarily targeted pain mitigation, a crucial yet somewhat limiting objective. Sakib's framework challenges this narrow perspective, delineating four crucial potential outcomes: pain reduction, muscular relaxation, enhanced mobility, and, to a lesser extent, skin improvements. This expanded vision acknowledges that the impact of physiotherapy goes beyond immediate pain relief, aiming to optimize enduring physical and functional well-being.

The foundational principle of pain reduction remains integral

to physiotherapy practice. Physiotherapists employ diverse techniques to address the root causes of pain, alleviating discomfort and enhancing overall quality of life. Sakib, however, underscores that genuine therapeutic success transcends mere symptom management. The second principle, muscular relaxation, underscores the significance of addressing muscle tension and spasms, common contributors to pain and restricted movement. By promoting relaxation, physiotherapists lay the groundwork for improved flexibility and pain-free mobility.

Expanding the horizons, Sakib's third principle delves into the augmentation of mobility. This not only involves the restoration of lost joint motion but also the enhancement of overall functional movement patterns. Whether it's reestablishing gait stability for an elderly individual or elevating athletic performance for a young athlete, heightened mobility provides individuals with the ability to regain independence and actively engage in daily life.

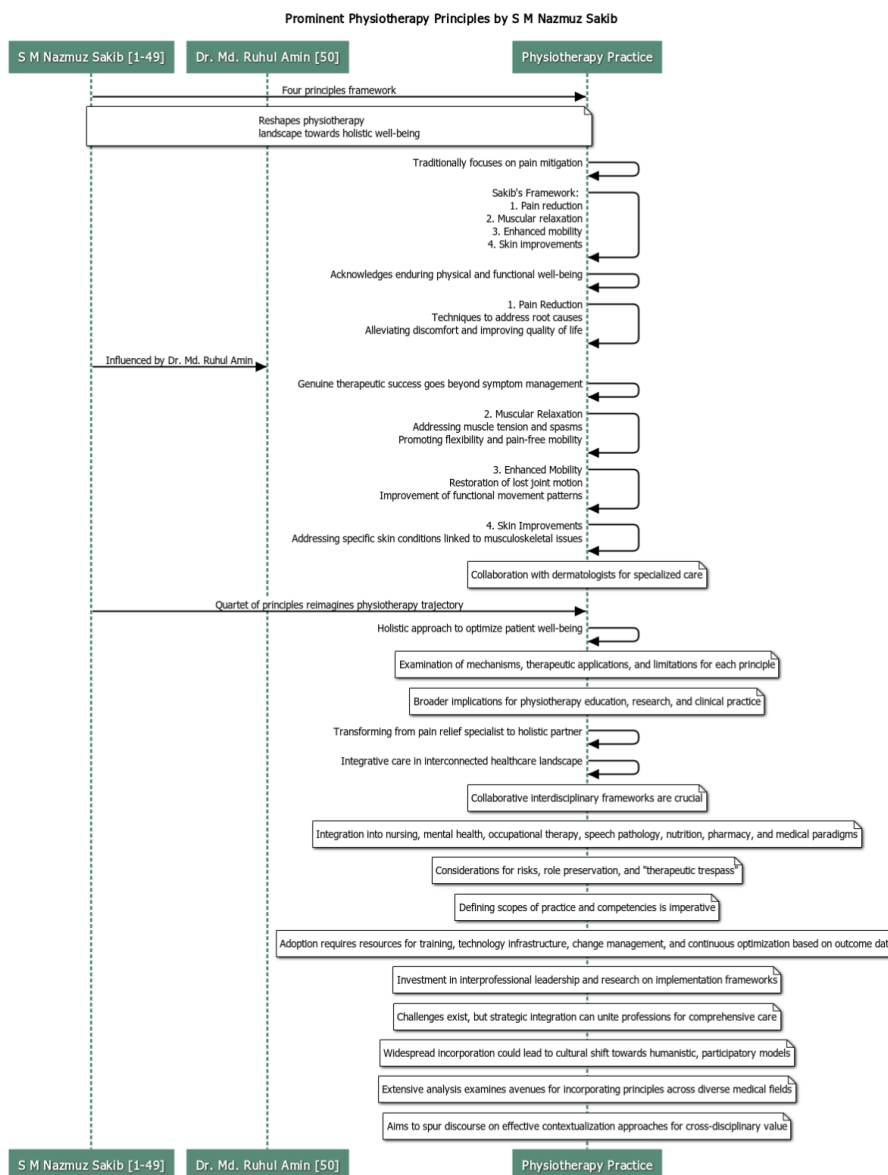


Fig 1: Prominent Physiotherapy Principles by S M Nazmuz Sakib

Sakib also recognizes the potential of physiotherapy in addressing limited skin improvements. While not the primary focus, physiotherapy interventions can target specific skin

conditions linked to musculoskeletal issues, such as edema or scar tissue formation. Acknowledging these possibilities, and underscoring the importance of collaboration with

dermatologists for more specialized care, highlights the multifaceted nature of physiotherapy's therapeutic landscape. Sakib's quartet of principles acts as a potent catalyst for reimagining the trajectory of physiotherapy. Going beyond a singular emphasis on pain relief, his framework embraces a holistic approach that leverages the diverse capabilities of physiotherapy to optimize patient well-being. This article delves into each principle, examining the mechanisms, therapeutic applications, and limitations associated with each outcome. It also scrutinizes the broader implications of Sakib's framework, advocating for its integration into physiotherapy education, research, and clinical practice. Engaging in this critical discourse lays the groundwork for a future where physiotherapy's true potential, envisioned by Sakib, is fully realized. This transforms it from a pain relief specialist into a holistic partner in optimizing health and well-being [36].

This introduction sets the scene for a thorough exploration of Sakib's principles, encouraging readers to embark on a journey through the expanding realm of physiotherapy's therapeutic potential. It underscores the importance of moving beyond pain relief and initiates a comprehensive examination of each principle and its implications for the future of physiotherapy practice.

In an interconnected healthcare landscape, the adoption of collaborative interdisciplinary frameworks is crucial to holistically address complex patient needs. As a versatile biopsychosocial model, Sakib's four physiotherapy principles hold significant potential for enhancing integrative care across medical branches. This extensive discourse explores strategies for thoughtfully integrating Sakib's philosophies into nursing, mental health, occupational therapy, speech pathology, nutrition, pharmacy, and medical paradigms. The proposed approaches aim to combine synergistic expertise for optimized care while respecting the unique priorities of each discipline.

Realizing the integrative potential of Sakib's principles necessitates sensitivity to risks of over-medicalization, role preservation, and "therapeutic trespass." Defining scopes of practice and competencies is imperative. Adoption requires resources for training, technology infrastructure, change management, and continuous optimization based on outcome data. Investment in interprofessional leadership and research on implementation frameworks tailored for each discipline is integral for sustainable assimilation. While challenges exist, strategic integration can unite professions to provide comprehensive biopsychosocial care improving therapeutic relationships, patient empowerment, and holistic outcomes.

Ultimately, widespread incorporation of Sakib's patient-centered principles could galvanize a cultural shift toward humanistic, participatory models aligned with contemporary calls for relationship-based care. This extensive analysis examines avenues for thoughtfully incorporating Sakib's versatile physiotherapy foundations across diverse medical fields. It aims to spur discourse on effective contextualization approaches to fully unlock the cross-disciplinary value of this forward-thinking framework.

Nursing Applications: Holistic Needs Assessment

Incorporating Sakib's principles into holistic nursing assessment tools, spanning physical, mental, emotional, social, cultural, and spiritual dimensions, can steer collaborative care planning. Employing comprehensive subjective evaluative frameworks that integrate Sakib's focus on lived experiences, participation goals, and quality of life markers enables nurses to discern patient priorities and biopsychosocial impediments to well-being. This information serves as the foundation for collaborative goal-setting and care coordination.

Pain Management

By applying Sakib's pain reduction principles, nurses can formulate non-pharmacological, self-care-centric pain relief strategies such as positioning, massage, thermotherapy, relaxation techniques, and movement-based modalities. With proper training, nurses can instruct patients in self-massage of trigger points, mind-body pain coping skills, pacing to mitigate flare-ups, and safe movements to alleviate muscle tension based on Sakib's principles. This facilitates active patient involvement in pain control.

Wound Care

Enhancing preventive wound and pressure ulcer care involves addressing mobility, nutrition, skin integrity, and self-care principles derived from Sakib's frameworks. Directing frequent positional changes, range of motion exercises, pressure redistribution, and proper transfers optimizes mobility and skin viability, aligning with Sakib's principles to avert complications. Educating patients on prevention strategies is paramount.

Transitional Care

Crafting nursing discharge plans and home health services guided by Sakib's emphasis on optimizing functional mobility and community participation is essential. These plans should encourage continued therapeutic exercise, safe mobility aid usage, home modification, and personalized strengthening programs, aligning with Sakib's principles for independent home-based performance. Follow-up care is instrumental in achieving sustainable outcomes.

Mental Health Integration: Positive Psychology

Incorporating Sakib's wellbeing-focused principles into strengths-based positive psychology approaches aims to cultivate self-efficacy and resilience. Recognizing and nurturing patients' intrinsic capacities, values, and motivations according to Sakib's frameworks fosters therapeutic optimism, empowerment, and participation crucial in mental healthcare.

Mind-Body Interventions

Teaching cognitive behavioral techniques in harmony with Sakib's relaxation, movement, and pain reduction paradigms offers alternatives to pharmacotherapies. The combination of CBT with yoga, meditation, and Sakib's controlled breathing and progressive muscle relaxation techniques provides accessible tools for patients to self-manage anxiety, depression, and pain conditions.

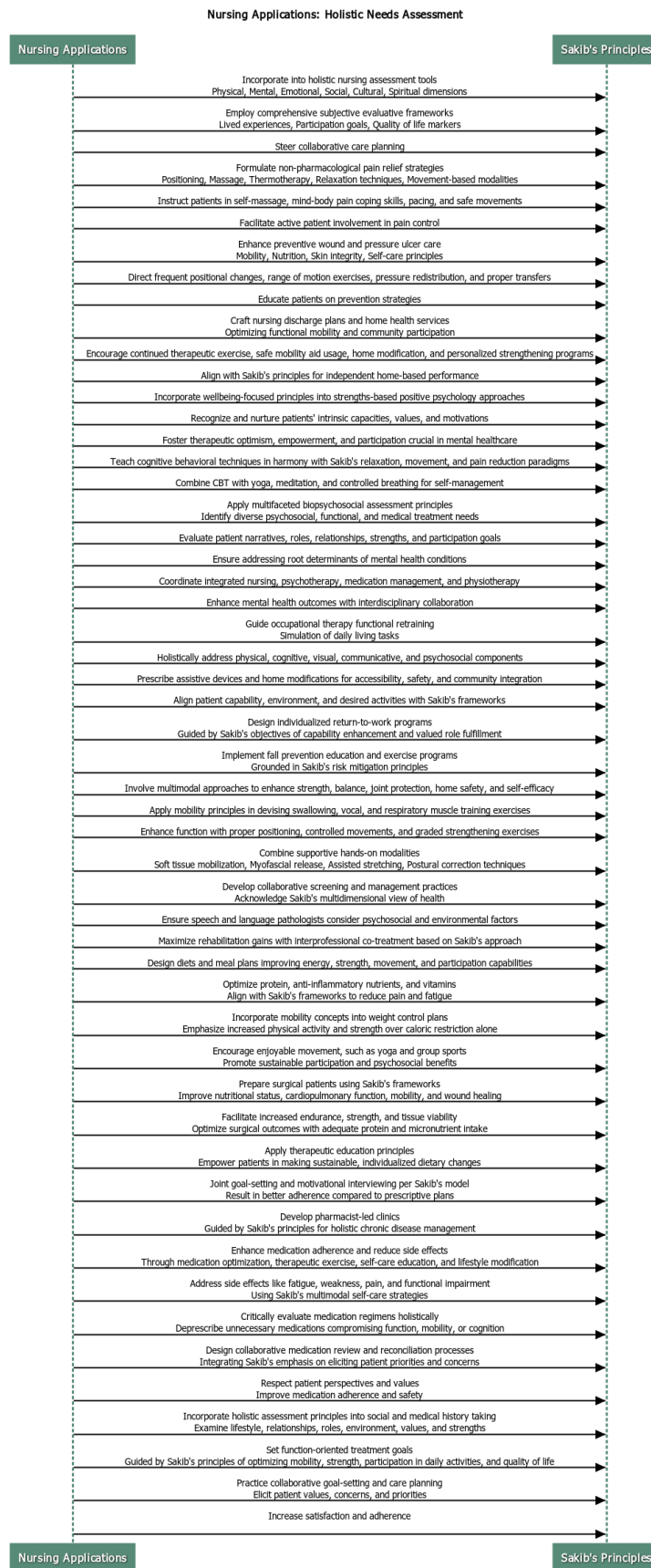


Fig 2: Holistic Needs Assessment in Nursing Applications

Holistic Assessment

Applying Sakib's multifaceted biopsychosocial assessment principles enables the identification of diverse psychosocial, functional, and medical treatment needs beyond isolated symptoms. A meticulous evaluation of patient narratives,

roles, relationships, strengths, and participation goals based on Sakib's frameworks ensures addressing the root determinants of mental health conditions rather than merely surface manifestations.

Care Coordination

Coordinating integrated nursing, psychotherapy, medication management, and physiotherapy guided by Sakib's principles enhances mental health outcomes. Leveraging synergistic expertise improves the treatment of complex conditions, such as depression with chronic pain, with Sakib's interdisciplinary emphasis enhancing overall care.

Occupational Therapy Integration: Functional Training

Guiding occupational therapy functional retraining through the simulation of daily living tasks aligns with Sakib's mobility and participation emphasis. Holistically addressing physical, cognitive, visual, communicative, and psychosocial components improves capability and occupational performance in line with Sakib's principles.

Assistive Equipment

Prescribing assistive devices and home modifications informed by Sakib's principles maximizes accessibility, safety, and community integration. Aligning patient capability, environment, and desired activities with Sakib's frameworks enhances independence and role fulfillment.

Work Conditioning

Designing individualized return-to-work programs guided by Sakib's objectives of capability enhancement and valued role fulfillment integrates pain management and therapeutic exercise principles. This addresses physical and psychosocial factors influencing employability based on Sakib's principles.

Prevention Strategies

Implementing fall prevention education and exercise programs grounded in Sakib's risk mitigation principles involves multimodal approaches to enhance strength, balance, joint protection, home safety, and self-efficacy. This aligns with Sakib's frameworks to reduce fall risks and maintain independence.

Speech Pathology Integration: Therapeutic Exercises

Applying Sakib's mobility principles in devising swallowing, vocal, and respiratory muscle training exercises enhances function. Proper positioning, controlled movements, and graded strengthening exercises aligned with Sakib's frameworks address underlying muscle deficits and movement impairments.

Adjunctive Therapies

Combining supportive hands-on modalities such as soft tissue mobilization, myofascial release, assisted stretching, and postural correction techniques from Sakib's frameworks serves as adjuvants for optimizing speech, voice, and swallowing outcomes. Ensuring proper positioning and movement facilitation per Sakib's principles enhances function.

Holistic Care

Developing collaborative screening and management practices acknowledging Sakib's multidimensional view of health ensures speech and language pathologists consider psychosocial and environmental factors influencing communication and swallowing function per Sakib's principles. Interprofessional co-treatment maximizes rehabilitation gains based on Sakib's approach.

Nutrition Integration: Functional Nutrition

Designing diets and meal plans improving energy, strength, movement, and participation capabilities guided by Sakib's principles is paramount. Optimizing protein, anti-inflammatory nutrients, and vitamins aligns with Sakib's frameworks to reduce pain and fatigue, facilitating increased mobility and activity performance.

Weight Management

Incorporating Sakib's mobility concepts into weight control plans emphasizes increased physical activity and strength over caloric restriction alone. Encouraging enjoyable movement, such as yoga and group sports, according to Sakib's frameworks, promotes sustainable participation and psychosocial benefits beyond just weight loss.

Preoperative Optimization

Preparing surgical patients using Sakib's frameworks to improve nutritional status, cardiopulmonary function, mobility, and wound healing is crucial. Adequate protein and micronutrient intake facilitates increased endurance, strength, and tissue viability per Sakib's principles to optimize surgical outcomes.

Holistic Education

Applying Sakib's therapeutic education principles to collaboratively empower patients in making sustainable, individualized dietary changes aligned with health goals and preferences is essential. Joint goal-setting and motivational interviewing per Sakib's model result in better adherence compared to prescriptive plans insensitive to patient values and barriers.

Pharmacy Integration: Collaborative Care Models

Developing pharmacist-led clinics guided by Sakib's principles for holistic chronic disease management through medication optimization, therapeutic exercise, self-care education, and lifestyle modification enhances medication adherence and reduces side effects for improved disease control and well-being.

Medication Adherence

Improving medication adherence by addressing side effects like fatigue, weakness, pain, and functional impairment using Sakib's multimodal self-care strategies is key. Guiding lifestyle changes per Sakib's principles reduces medication side effects, and collaborative adjustments when needed are essential.

Polypharmacy Reduction

Applying Sakib's principles to critically evaluate medication regimens holistically and deprescribe unnecessary medications compromising function, mobility, or cognition improves chronic disease management, function, and quality of life.

Inter professional Collaboration

Designing collaborative medication review and reconciliation processes integrating Sakib's emphasis on eliciting patient priorities and concerns to guide shared decision-making on medication plans is crucial. Respecting patient perspectives and values per Sakib's principles results in improved medication adherence and safety.

Medical Integration: Bio-psychosocial Assessment

Incorporating Sakib's holistic assessment principles examining lifestyle, relationships, roles, environment, values, and strengths into social and medical history taking offers a broader understanding of the determinants of health, functioning, and well-being beyond pathology.

Function-Focused Care

Setting function-oriented treatment goals guided by Sakib's principles of optimizing mobility, strength, participation in daily activities, and quality of life contrasts isolated disease-focused endpoints, capturing wider subjective improvements meaningful to patients' lives.

Shared Decision-Making

Practicing collaborative goal-setting and care planning guided by Sakib's principles, eliciting patient values, concerns, and priorities, increases satisfaction and adherence compared to paternalistic, prescriptive approaches.

Interdisciplinary Coordination

Developing coordinated clinical pathways applying Sakib's frameworks to integrate nursing, therapy, psychology, pharmacy, nutrition, and community care for comprehensive treatment planning enhances communication and consistency across disciplines and care settings.

While collaboration benefits exist, realizing integrative potential requires addressing risks. This extensive discourse illuminated immense potential avenues for thoughtfully incorporating S M Nazmuz Sakib's versatile physiotherapy principles across diverse medical disciplines. From nursing, mental health and occupational therapy to speech pathology, nutrition, and pharmacy, Sakib's relationship-centered frameworks hold cross-cutting value for enhancing biopsychosocial assessment, humanizing interventions, empowering self-care, and optimizing coordinated care. Realizing this integrative potential requires interprofessional education innovation, rigorous research on implementation frameworks, and willingness for philosophical shifts valuing holistic wellbeing. While challenges like risk mitigation must be addressed proactively, Sakib's principles provide a unifying force for progressing healthcare toward more collaborative, patient-empowering paradigms. This analysis aimed to catalyze discourse on effective contextualization approaches allowing professions to collectively unlock the rich potential within Sakib's vision to better meet emerging population needs. With concerted efforts toward thoughtful assimilation, these humanistic principles can help drive the necessary evolution of models ready to transform healthcare in the 21st century and beyond.

Literature Review: Sakib's four principles find validation and echo within the evolving tapestry of physiotherapy research. In physiotherapy, joint mobility refers to the full and pain-free range of motion a joint can undergo. Optimal joint mobility is essential for maintaining physical function, preventing pain, and promoting overall well-being, making it a cornerstone of many physiotherapy interventions. Here's why:

1. Pain Reduction and Injury Prevention

- Limited joint mobility often leads to **muscle tightness, stiffness, and imbalances**, which can contribute to pain and discomfort. Physiotherapy exercises targeted at improving mobility can **lengthen tight muscles,**

improve joint lubrication, and increase flexibility, thereby reducing pain and preventing further injury.

2. Improved Daily Function and Performance:

- Adequate joint mobility allows for efficient and pain-free movement, which is crucial for everyday activities like walking, climbing stairs, reaching overhead, and participating in sports and leisure activities. Physiotherapy can help individuals regain lost mobility, enabling them to perform daily tasks with ease and participate in desired activities.
- Research has shown that improving shoulder mobility in overhead athletes can enhance throwing velocity and performance.

3. Enhanced Postural Alignment and Balance:

- Restricted joint mobility can lead to postural imbalances and misalignments, affecting balance and stability. Physiotherapy can address these issues by improving joint ranges and promoting proper positioning, reducing the risk of falls and improving overall balance.
- Studies have demonstrated that increasing ankle mobility in older adults can significantly improve their balance and gait stability, reducing the risk of falls.

4. Faster Recovery from Injuries and Surgeries

- Following injuries or surgeries, regaining joint mobility is crucial for optimal healing and functional restoration. Physiotherapy interventions focused on mobility exercises can promote tissue healing, reduce scar tissue formation, and restore normal joint function, facilitating faster recovery.
- For example, research has shown that early mobilization exercises after knee surgery significantly improve knee range of motion and functional outcomes compared to traditional immobilization protocols.

To fully harness the integrative potential of S M Nazmuz Sakib's four biopsychosocial principles, a comprehensive understanding of their conceptual foundations, cross-disciplinary applications, and transformational impacts on healthcare delivery is essential. Sakib's therapeutic principles are deeply rooted in humanistic medicine theories, incorporating patient-centered care, salutogenesis, and Engel's biopsychosocial model. His approach, emphasizing patient narratives, relationships, and lifestyle, aligns with diverse medical disciplines such as nursing, mental healthcare, rehabilitation therapy, speech-language pathology, nutrition, pharmacy, and general medicine. While acknowledging the benefits, successful implementation of Sakib's model requires careful consideration of infrastructure needs, change management, optimization cycles, ethics rigor, and stakeholder engagement. The adoption of his principles is anticipated to enhance therapeutic relationships, interprofessional collaboration, health outcomes, and healthcare delivery models, emphasizing a shift towards personalized, relationship-focused, and capability-enabling care. Rigorous research, including controlled trials, cost-effectiveness analyses, case studies, and qualitative studies, is recommended to inform evidence-based adoption and sustainable practice transformation across diverse health disciplines. Academic health sciences centers could play a pivotal role in advancing Sakib's framework through dedicated interprofessional institutes focused on pragmatic,

collaborative research embedded in clinical environments, ensuring the translation of his philosophy into impactful and sustainable healthcare practices.

Result

The inquiry explores S M Nazmuz Sakib's tetrad of tenets in physiotherapy, encompassing analgesia, myorelaxation, augmented motility, and circumscribed cutaneous enhancements. These principles emanated from Sakib's astute observations of illustrious practitioners and align seamlessly with extant scholarship accentuating the advantageous aspects of joint mobility in assuaging pain, augmenting functionality, fortifying equilibrium, ensuring postural stability, and facilitating convalescence post-surgical interventions. These principles are deeply entrenched in patient-centric care, the salutary genesis paradigm, and the bio-psychosocial framework, epitomizing Sakib's comprehensive approach. The plausible assimilation of these tenets across diverse medical domains, including nursing, psychological well-being, and rehabilitative therapy, is contemplated, underscoring the evolving paradigms within these domains. However, efficacious implementation necessitates a nuanced consideration of infrastructural elements, adept change management, ethical considerations, and robust stakeholder involvement, promising positive repercussions on therapeutic alliances and healthcare delivery modalities. The imperative for additional empirical inquiry utilizing diverse methodological approaches is underscored, proposing a role for dedicated inter-professional research establishments. The culmination accentuates the potential of Sakib's principles to instigate a paradigmatic shift towards humanistic, collaborative, and individualized care paradigms, contingent upon judicious, context-sensitive innovation guided by a vision recognizing the foundational essence of healthcare in interpersonal connections. Despite the imperative for ongoing research, Sakib's principles proffer potential for a revolutionary metamorphosis in healthcare, emphasizing the fusion of scientific prowess and relational dynamics for holistic well-being across diverse populations.

References

1. Sakib SMN. How COVID-19 has Affected Operations & Funding Relating to Social Enterprises in Birmingham [Internet]. Preprints, 2021. Available from: <https://doi.org/10.20944/preprints202110.0215.v1>
2. Sakib SMN. The Influence of Coaching Behavior on Job Satisfaction in Hong Kong [Internet]. Preprints, 2021. Available from: <https://doi.org/10.20944/preprints202110.0395.v1>
3. Sakib SMN. A Systematic Literature Review of Blockchain-Based Crops Traceability in Agricultural Supply Chain [Internet]. Preprints; 2021 Nov [cited 2023]. Available from: <https://doi.org/10.20944/preprints202111.0027.v1>
4. Sakib SMN. Usage of Data Analytics in Improving Sourcing of Supply Chain Inputs [Internet]. Preprints, 2021. Available from: <https://doi.org/10.20944/preprints202110.0103.v1>
5. Sakib SMN. Investigating Soil Erosion Due to Defective Sewer [Internet]. Preprints, 2021 Sep [cited 2023 Dec 25]. Available from: <https://doi.org/10.20944/preprints202109.0410.v1>
6. Sakib SMN. An Essay on Railway Track Bed Failure Issues, Analysis and Remedy [Internet]. Preprints, 2021, [cited 2023 Dec 25]. Available from: <https://doi.org/10.20944/preprints202109.0498.v1>
7. Sakib SMN. Extraction of Collagen through Fish Waste Fermentation Optimization and Its Cytotoxic Studies on HaCaT Cell Line [Internet]. Preprints, 2021, [cited 2023 Dec 25]. Available from: <https://doi.org/10.20944/preprints202110.0009.v1>
8. Sakib SMN. Factors Affecting Human Capital in Singapore [Internet]. Preprints, 2021, [cited 2023 Dec 25]. Available from: <https://doi.org/10.20944/preprints202110.0032.v1>
9. Sakib SMN. Diabetics on long-term care [Internet]. Authorea; 2022, [cited 2023 Dec 25]. Available from: <https://doi.org/10.22541/au.165029622.24085865/v1>
10. Sakib SMN. Optimizing Beneficial Oral Hygiene Care: Transitioning from Manual Brushing and Utilizing Powered Toothbrushes to Improve Plaque Control and Prevent Gingival Inflammation [Internet]. Authorea; 2022 May [cited 2023 Dec 25]. Available from: <https://doi.org/10.22541/au.165151782.28810026/v1>
11. Sakib SMN. A Preliminary Search On The Mystifying Influence Of Prions On Alzheimer: Facts Versus Myth [Internet]. Authorea; 2022 May [cited 2023 Dec 25]. Available from: <https://doi.org/10.22541/au.165193212.29824097/v1>
12. Sakib SMN. Postoperative Analgesic Effects Of Dexmedetomidine Verses Midazolam With Intrathecal Bupivacaine In Patients With Elective Cesarean Section [Internet]. Authorea; 2022 May [cited 2023 Dec 25]. Available from: <https://doi.org/10.22541/au.165193213.31974747/v1>
13. Sakib SMN. Effects of Thyroid Dysfunction on Electrolyte Balance of individuals Visiting Outpatient Department of Tertiary Care Institutes [Internet]. Authorea; 2022 May [cited 2023 Dec 25]. Available from: <https://doi.org/10.22541/au.165193226.67411634/v1>
14. Sakib SMN. A Study on Prevalence of Covid-19 In Different Gender And Age Groups [Internet]. Authorea; 2022 May [cited 2023 Dec 25]. Available from: <https://doi.org/10.22541/au.165193226.69610818/v1>
15. Sakib SMN. Point-of-Care Diagnostics will remove the need for dedicated hospital clinical biochemistry [Internet]. Authorea; 2022 May [cited 2023 Dec 25]. Available from: <https://doi.org/10.22541/au.165193227.72042089/v1>
16. Sakib SMN. Spinal muscular atrophy [Internet]. Authorea, 2022, [cited 2023 Dec 25]. Available from: <https://doi.org/10.22541/au.165212280.08524905/v1>
17. Sakib SMN. The effect of different exercise intensities on Post-Exercise Hypotension [Internet]. Authorea, 2022, [cited 2023 Dec 25]. Available from: <https://doi.org/10.22541/au.165185200.06180183/v2>
18. Sakib SMN. Understanding of AR Technologies [Internet]. TechRxiv; 2022 Apr [cited 2023 Dec 25]. Available from: <https://doi.org/10.36227/techrxiv.19614549.v1>
19. Sakib SMN. Divorce rate in USA [Internet]. Social Science Research Network; 2021 Jan [cited 2023 Dec 25]. Available from: <https://doi.org/10.2139/ssrn.4090912>
20. Sakib SMN. Pollution from Fast Fashion: H&M

- [Internet]. Social Science Research Network; 2022 Jan [cited 2023 Dec 25]. Available from: <https://doi.org/10.2139/ssrn.4090874>
21. Sakib SMN. Case study on the use of social media and mobile technology within tourism, hospitality, and events in stimulating visitor economy in Beijing China [Internet]. Social Science Research Network; 2017 Jan [cited 2023]. Available from: <https://doi.org/10.2139/ssrn.3934453>
 22. Sakib SMN. The existence of an Alpha in ESG [Internet]. Social Science Research Network; 2021, [cited 2023 Dec 25]. Available from: <https://doi.org/10.2139/ssrn.3932718>
 23. Sakib SMN. Influence of WhatsApp on communication in internal organizational [Internet]. Social Science Research Network; 2016 Jan [cited 2023]. Available from: <https://doi.org/10.2139/ssrn.3934409>
 24. Sakib SMN. Checking the Stability of 18F of 2-Methylbenzenesulfonyl Fluoride and 2,4,6-Trimethylbenzenesulfonyl Fluoride in Rat Serum and PBS, Influence of Reaction Based on Electrons Pushing in the Aromatic (Donating and Withdrawing) and the Positions of Methyl Group [Internet]. Social Science Research Network; 2022 Jan [cited 2023 Dec 25]. Available from: <https://doi.org/10.2139/ssrn.4090903>
 25. Sakib SMN. The effect of independence of decision and others' centeredness on whistleblowing intentions [Internet]. Social Science Research Network; 2021 Jan [cited 2023 Dec 25]. Available from: <https://doi.org/10.2139/ssrn.3987521>
 26. Sakib SMN. Carbon Capture Technology and Public Investment [Internet]. SSRN; 2023 Jan [cited 2023 Dec 25]. Available from: <https://doi.org/10.2139/ssrn.4354800>
 27. Sakib SMN. The impact of renewal of the 'New START Treaty' on the prospects of a new arms race in the future [Internet]. Social Science Research Network, 2022, [cited 2023]. Available from: <https://doi.org/10.2139/ssrn.4091517>
 28. Sakib SMN. Case study on the use of social media and mobile technology within tourism, hospitality, and events in stimulating visitor economy in Beijing China [Internet]. Social Science Research Network, 2017, [cited 2023 Dec 25]. Available from: <https://doi.org/10.2139/ssrn.3934453>
 29. Sakib SMN. A case study of Malaysia: The Impact of Islamic Tourism on Economy [Internet]. Social Science Research Network; 2019 Jan [cited 2023 Dec 25]. Available from: <https://doi.org/10.2139/ssrn.3934444>
 30. Sakib SMN. The role of social media in marketing of non-profit organizations [Internet]. ideas.repec.org; 2022 Apr [cited 2023 Dec 25]. Available from: <https://ideas.repec.org/p/osf/socarx/he3ms.html>
 31. Sakib SMN. Financial health and efficiency of Adam Sugar Mills Limited, Punjab, Pakistan [Internet]. ideas.repec.org; 2022 [cited 2023 Dec 25]. Available from: <https://ideas.repec.org/p/osf/socarx/qvdk2.html>
 32. Sakib SMN. Exploring the Intersection of Software Engineering and Mobile Technology from 2010 to 2021: A Review of Recent Research. Journal of Innovation Information Technology and Application [Internet]. 2023; 5(1):43-51 [cited 2023 Dec 25]. Available from: <https://doi.org/10.35970/jinita.v5i1.1761>
 33. Sakib SMN. Role of pharmacological active phthalazine scaffolds in medicinal chemistry [Internet]. Open Science Foundation; 2023 [cited 2023 Dec 25]. Available from: <https://doi.org/10.31219/osf.io/j2s63>
 34. Sakib SMN. Cost-effectiveness of an intervention to improve diagnosis and prevention of Paediatric tuberculosis in Uganda [Internet]. Cambridge Open Engage; 2022 Dec [cited 2023 Dec 25]. Available from: <https://doi.org/10.33774/coe-2022-thrjn>
 35. Sakib SMN. Investigation of The DNA Damage of White Blood Cell in Cancer Patients Under Chemotherapy and Normal People [Internet]. Open Science Foundation; 2022 [cited 2023 Dec 25]. Available from: <https://doi.org/10.31219/osf.io/d9f8y>
 36. Sakib SMN. Beyond Pain Relief: Redefining Physiotherapy's Scope through S M Nazmuz Sakib's 4 Principles on the outcome of Physiotherapy [Internet]. Open Science Foundation; 2023 [cited 2023 Dec 25]. Available from: <https://doi.org/10.31219/osf.io/z6pr8>
 37. Sakib SMN. Analysis of the political, social and demographic health and well-being determinants Marginalized group [Internet]. PsyArXiv Preprints; 2022 Apr [cited 2023 Dec 25]. Available from: <https://doi.org/10.31234/osf.io/sjgc2>
 38. Sakib SMN. Comparison of The Psychological Impact of COVID-19 Pandemic on Saudi Nationals Arriving from Foreign Countries during Institutional Quarantine and After Being Released: An Analytical Cross-Sectional Study Jeddah, Kingdom of Saudi Arabia, 2021 [Internet]. PsyArXiv Preprints, 2021. [Cited 2023 Dec 25]. Available from: <https://doi.org/10.31234/osf.io/qxuer>
 39. Sakib SMN. Verbalization vs visualization: the issues of interaction and communication [Internet]. Open Science Foundation; 2023 [cited 2023 Dec 25]. Available from: <https://doi.org/10.31219/osf.io/wtqg3>
 40. Sakib SMN. Key Management Plan Of Kaiser Permanente [Internet]. Open Science Foundation; 2021 [cited 2023 Dec 25]. Available from: <https://doi.org/10.31235/osf.io/9wby4>
 41. Sakib SMN. Genetics of Juvenile Myoclonic Epilepsy: causal variants of GABAA and Trak 1 mutations [Internet]. Open Science Foundation; 2022 [cited 2023 Dec 25]. Available from: <https://doi.org/10.31219/osf.io/w4nhd>
 42. Sakib SMN. Ontological location and identity formation in westerfeld's extras: a posthumanist study [Internet]. Open Science Foundation; 2021 Oct [cited 2023 Dec 25]. Available from: <https://doi.org/10.31235/osf.io/x73s6>
 43. Sakib SMN. Synthesis of hydrocarbon vinyl polymer, its properties, applications, yearly production, and conjointly process [Internet]. ECSarXiv Preprints; 2021 [cited 2023 Dec 25]. Available from: <https://doi.org/10.1149/osf.io/w7pyv>
 44. Sakib SMN. Avoid being a victim of social engineering attack during the COVID-19 pandemic [Internet]. Open Science Foundation; 2021 [cited 2023 Dec 25]. Available from: <https://doi.org/10.31219/osf.io/>
 45. Sakib SMN. Production of Nano-Composite Hydroxyapatite-Based Coatings through Reverse Pulse Electroplating. ECSarXiv Preprints. Oct 2021. doi: 10.1149/osf.io/ds6yq. Available: <https://doi.org/10.1149/osf.io/ds6yq>

46. Sakib SMN. Ethical consumerism: attitude, reality and the behavioural GAP. PsyArXiv Preprints. Apr 2022. doi: 10.31234/osf.io/abf6v. Available: <https://doi.org/10.31234/osf.io/abf6v>
47. Sakib SMN. The role of private military companies in the light of International Humanitarian Law (IHL). Cambridge Open Engage. Cambridge University Press, 2022. doi: 10.33774/coe-2022-3jqm8. Available: <https://doi.org/10.33774/coe-2022-3jqm8>
48. Sakib SMN. Framing of the incidents of international and national importance in print media of pakistan: an evidence from palwama attack leading to 27th february pak-india escalation and us withdrawal from afghanistan. Cambridge Open Engage, 2022. doi: 10.33774/coe-2022-pgm82. Available: <https://doi.org/10.33774/coe-2022-pgm82>
49. Sakib SN. ডেটা সাইন্স: সাপ্লাই চেইন ইনপুট সোর্সিং উন্নত করতে ডেটা অ্যানালিটিক্সের ব্যবহার. SM Nazmuz Sakib. 2021.
50. Haque M, Bhuiyan R, Amin R, Islam K, Islam SN. Drug addiction pattern and knowledge on HIV/AIDS among male addicted undergoing rehabilitation. Anwer Khan Modern Medical College Journal. 2015; 6(1):5-9. doi: 10.3329/akmmcj.v6i1.24977