

UNIVERSITY OF WALES TRINITY SAINT DAVID

APPLICATION FOR ETHICAL APPROVAL (Taught Postgraduate Programmes)

Section A: About You

Field	Details
Full Name	Shanikumar Vipulbhai Soliya
Student Identification Number	2532722
Student Email Address	2532722@student.uwtsd.ac.uk
Programme of Study	MSc Public Health and Social Care in Practice
Assigned Academic Supervisor	

Section B: Internal and External Ethical Guidance Materials

The applicant confirms that the proposed research activity has been designed in strict accordance with the following institutional, national, and professional ethical frameworks:

Framework / Guidance Document	Adhered / Checked	Notes & Compliance Strategy
UWTSD Research Ethics & Integrity Code of Practice	Yes	Full alignment with institutional standards for integrity, transparency, and risk minimisation.
UWTSD Research Data Management Policy	Yes	Strict adherence to cloud security, institutional storage, and data protection guidelines.
UK Policy Framework for Health and Social Care Research	Yes	Ensures secondary evidence evaluation adheres to UK-wide public health research standards.

Framework / Guidance Document	Adhered / Checked	Notes & Compliance Strategy
CSP Code of Members' Professional Values and Behaviour	Yes	Ensures clinical parameters of physiotherapy and tele-rehabilitation align with UK standards.

Section C: Details of Research Activity

1. Indicative Title

The effectiveness of tele-rehabilitation in improving musculoskeletal health among young adults in the UK

2. Research Timeline

- **Proposed Start Date:** January 2027
- **Proposed End Date:** September 2027

3. Purpose of Research Activity

Musculoskeletal (MSK) conditions represent one of the leading causes of physical disability, functional limitation, and lost working days across the United Kingdom. While historically associated with older populations, recent epidemiological trends indicate a significant surge in MSK complaints such as non-specific lower back pain, neck strain, tendinopathy, and repetitive strain injuries among young adults aged 18–35. This trend is substantially driven by sedentary occupational habits, increased screen time, altered post pandemic working patterns, and dynamic lifestyle factors.

Concurrently, the National Health Service (NHS) faces profound operational challenges, including extended waiting lists for outpatient physiotherapy and community-based rehabilitation services. In response, digital health interventions and tele-rehabilitation pathways comprising asynchronous exercise applications, real-time video physiotherapy consultations, remote biofeedback monitoring, and digital self-management portals have been rapidly deployed across UK healthcare trusts.

Despite their accelerated adoption, significant empirical gaps remain regarding the targeted effectiveness, digital engagement, adherence barriers, and long-term clinical outcomes of tele-rehabilitation specifically within the young adult demographic (aged 18–

35) across England, Scotland, Wales, and Northern Ireland. This research project comprises a comprehensive desk-based systematic review and evidence synthesis designed to evaluate the clinical efficacy, cost-effectiveness, and equitable service delivery of tele-rehabilitation modalities compared to conventional face-to-face MSK care in the UK.

4. Research Questions

Primary Research Question

- How effective are tele-rehabilitation interventions in improving functional and clinical musculoskeletal outcomes among young adults aged 18–35 across the United Kingdom?

Secondary Research Questions

1. How do tele-rehabilitation interventions compare to conventional face-to-face physiotherapy in terms of patient adherence, user satisfaction, and digital engagement among young adults in the UK?
2. What are the key health system, digital literacy, and socioeconomic barriers affecting the equitable delivery of NHS digital MSK pathways across different UK regions?
3. What is the comparative cost-effectiveness and resource impact of implementing tele-rehabilitation models within primary and community healthcare services in the UK?

5. Aims

1. **Clinical Efficacy Evaluation:** To systematically evaluate and synthesize evidence on the clinical efficacy of tele-rehabilitation modalities in reducing pain, restoring functional mobility, and improving quality of life in young adults with MSK disorders in the UK.
2. **Adherence & Engagement Assessment:** To examine the behavioral, psychological, and technological determinants of patient adherence and satisfaction with digital MSK interventions among young adults.
3. **Public Health & Policy Appraisal:** To evaluate the broader public health implications, NHS service integration barriers, and health equity considerations of scaling tele-rehabilitation across diverse UK populations.

6. Objectives

1. **Literature Identification:** Perform a comprehensive, structured literature search across established electronic databases (PubMed, CINAHL, Cochrane Library, MEDLINE, and NHS Evidence) for peer-reviewed studies published between 2015 and 2027 focusing on UK tele-rehabilitation for young adults.
2. **Methodological Quality Appraisal:** Critically appraise selected studies using standardized Critical Appraisal Skills Programme (CASP) tools to evaluate methodological rigor, bias, and validity.
3. **Evidence Synthesis:** Synthesize quantitative clinical outcome metrics (e.g., visual analogue scale scores, functional disability indices) and qualitative user experience data using PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines.
4. **Policy Recommendation Framework:** Formulate evidence-based public health and service delivery recommendations to inform future NHS digital health strategies, physiotherapy practices, and health equity frameworks across the UK.

7. Data Collection Methods

This study is strictly a **desk-based systematic review and secondary data synthesis**. No primary empirical data collection, human participant testing, physical interventions, or direct interactions with individuals will take place.

Search Strategy & Databases (PubMed | CINAHL | Cochrane Library | NHS Evidence)

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Screening & Eligibility Filter
(PRISMA Flowchart Criteria | UK Focus | Age 18–35)

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Critical Appraisal

(CASP Tools for Quantitative & Qualitative)

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Data Extraction & Synthesis (Narrative & Thematic Secondary Analysis)

The methodological workflow comprises:

- **Search Strategy:** Systematic identification of peer-reviewed literature using boolean operators and search strings combining terms: (Tele-rehabilitation OR Digital Health OR Virtual Physiotherapy) AND (Musculoskeletal OR MSK OR Low Back Pain) AND (Young Adults OR 18-35) AND (UK OR United Kingdom OR NHS).
- **Selection Criteria:** Inclusion of peer-reviewed empirical studies, randomized controlled trials (RCTs), cohort studies, and qualitative evaluations published in English from 2015 onwards. Excludes animal studies, non-UK health systems without comparative applicability, and studies without disaggregated data for adults aged 18–35.
- **Appraisal & Synthesis:** Formal quality appraisal using CASP criteria, followed by narrative and thematic synthesis adhering to PRISMA reporting standards.

Section D: Scope of Research Activity

Please indicate whether the proposed research involves any of the following elements:

Assessment Question	Yes	No
1. Does the study involve direct interventions or testing on human participants?		X
2. Does the study involve children or vulnerable adults (e.g., care home residents, individuals with severe cognitive impairments)?		X
3. Will the research involve access to private, confidential, or sensitive personal records without prior explicit consent?		X
4. Is there any risk of physical discomfort, pain, prolonged fatigue, or injury to participants?		X
5. Does the research involve psychological stress, anxiety, distress, or deception of any kind?		X

Assessment Question	Yes	No
6. Will biological samples (e.g., blood, tissue, saliva, DNA) be collected, processed, or stored?		X
7. Does the study involve NHS patients, NHS staff, or NHS premises requiring HRA / Integrated Research Application System (IRAS) approval?		X
8. Will participants receive financial incentives, compensation, or reimbursement beyond reasonable travel expenses?		X
9. Does the project involve high-risk covert observation, deception, or undisclosed recording?		X
10. Does the research involve hazardous substances, radioisotopes, or dangerous equipment?		X
11. Does the project involve military, security, or illegal activities?		X
12. Is there potential for commercial exploitation or conflict of interest regarding intellectual property?		X
13. Does the project involve international fieldwork or data collection outside the United Kingdom?		X
14. Will personal data covered by GDPR be processed, collected, or stored during the study?		X
15. Does the study involve topics of extreme sensitivity (e.g., radicalisation, self-harm, criminal activity)?		X
16. Are there any identified environmental risks or ecological impacts associated with this research?		X
17. Does the research present any institutional, reputational, or financial risk to UWTSD?		X

Note: As all questions are answered "NO", this project presents minimal risk and qualifies for streamlined review as a desk-based secondary synthesis.

Section E: Intended Participants

NOT APPLICABLE

This study is entirely desk-based and utilizes secondary, peer-reviewed, open-access, and publicly archived academic literature. No primary participants, human subjects, or clinical cohorts will be recruited, sampled, interviewed, or observed.

Section F: Anticipated Risks and Risk Management

1. Risks to Participants

- **Risk Assessment:** Not Applicable.
- **Mitigation Strategy:** No direct human recruitment or primary data gathering is involved.

2. Sensitive Topics

- **Risk Assessment:** Not Applicable.
- **Mitigation Strategy:** The scope of secondary review is restricted to general musculoskeletal health, physiotherapy outcomes, and public health delivery.

3. Risks to the Investigator

- **Risk Assessment:** Minor occupational risks associated with prolonged screen exposure, ergonomic strain, desk-bound sedentary work, and time-management pressure during data extraction.
- **Mitigation Strategy:** Application of ergonomic workstation principles, adherence to the 20-20-20 visual break rule, regular physical activity breaks, and strict adherence to the project management plan agreed upon with the dissertation supervisor.

4. Institutional Risks

- **Risk Assessment:** Potential academic integrity violations, misinterpretation of published findings, or unauthorized data loss.
- **Mitigation Strategy:** Strict adherence to academic referencing standards, rigorous application of CASP appraisal protocols, and cloud storage hosting within authenticated UWTSD enterprise systems.

5. Environmental Risks

- **Risk Assessment:** Negligible / minimal.
- **Mitigation Strategy:** Entirely paperless workflow, utilizing digital reference management tools (e.g., EndNote/Mendeley) and electronic document storage to eliminate material waste.

Section G: Feedback, Consent and Confidentiality

NOT APPLICABLE

As this study relies exclusively on published, peer-reviewed secondary literature and public policy documents, participant informed consent, participant debriefing, and personal confidentiality protocols are not required.

Section H: Data Protection and Storage

1. Data Protection Compliance

- The project strictly complies with the **UK General Data Protection Regulation (UK GDPR)** and the **Data Protection Act 2018**.
- **No personal data**, special category data, or identifiable individual health records will be collected, requested, stored, or processed at any stage of the study.

2. File and Document Management

- All secondary literature files, extracted database records, research notes, critical appraisal forms, and manuscript drafts will be stored exclusively within the student's secure **UWTSD Office 365 / OneDrive** cloud storage account.
- Account access is secured via university-issued single sign-on credentials and mandatory **Multi-Factor Authentication (MFA)**.
- No local storage on unencrypted USB drives or public computing terminals will be permitted.

3. Retention and Custody

- Secondary research files and search logs will be retained securely on UWTSD OneDrive for the duration of the MSc degree evaluation period.
- Files will be archived or disposed of in accordance with UWTSD Research Data Management policy post-graduation.

Section I: Use of Artificial Intelligence (AI) Tool

- **Explicit Boundaries:**
 - Generative AI will **NOT** be used to synthesize raw data, fabricate literature search results, generate false citations, or draft core critical arguments.
 - All qualitative and quantitative evidence synthesis, quality appraisal scoring, and strategic policy recommendations will remain the original, authentic work of the principal researcher.
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Section J: Declaration and Sign-off

Principal Researcher Declaration

I hereby confirm that the information provided in this application is accurate and complete to the best of my knowledge. I undertake to conduct the research in full accordance with the University of Wales Trinity Saint David (UWTSD) Research Ethics & Integrity Code of Practice, the UK GDPR, and relevant professional guidelines.

- **Name of Researcher:** Shanikumar Vipulbhai Soliya
- **Student Identification Number:** 2532722
- **Date:**
- **Digital Signature:** *Shanikumar Vipulbhai Soliya*

Academic Supervisor Endorsement

I confirm that I have reviewed this application for ethical approval. The proposed project consists entirely of desk-based secondary research presenting minimal ethical risk, and the research design conforms to university standards