



## Request for Proposals (RFP) for Technical Project Grants: Developing World Outreach Initiative (DWOI)



### **DWOI Technical Proposal Template**

(please fill in the requested information in the space provided)

#### **1. Cover page**

a. Write the (descriptive) title of the proposed Technical Project the next line(s).  
Investigative Research Study on Occupational Health Hazards in the Textile Industries in Odisha, India

b. List the names, emails, organizational affiliations, and roles of event organizer(s).  
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c. Write a brief synopsis (summary) of the project (2-3 sentences maximum).  
The textile industry in Odisha is a critical sector for employment, but it carries significant occupational health risks. Addressing these hazards requires coordinated efforts involving government policy, industry compliance, and worker awareness programs to improve health and safety standards. With this background in mind, a one-year investigative research study on occupational health hazards in the textile industries in Odisha, India has been designed by JRP in collaboration with **Centre for Occupational Health, KIIT University** to identify the common occupational health hazards, assess the working conditions and their impact on workers' health investigate the safety protocols ,protective measures used in the industry and provide recommendations for improving health and safety standards

## 2. Technical Project Proposal

- a. List the *Specific Goals* you plan to achieve here (one sentence each).

### **Goal 1:**

Identify the common occupational health hazards in textile industries in Odisha.

### **Goal 2:**

Assess the working conditions and their impact on workers' health and investigate the safety protocols and protective measures used in the industry.

### **Goal 3:**

Provide recommendations for improving health and safety standards

Conducting a study on occupational health hazards among textile industry workers can have a significant impact on the target population in several ways:

#### **1. Improved Health and Safety**

By identifying prevalent health hazards, such as respiratory issues, musculoskeletal disorders, or skin problems, the study can lead to improved working conditions. Recommendations based on the study may include better ventilation, ergonomic workstations, or protective equipment.

#### **2. Increased Awareness**

Workers, employers, and policymakers may become more aware of the specific risks associated with textile production, including exposure to chemicals, dust, or repetitive motions. This awareness can lead to preventive measures being implemented more effectively.

#### **3. Policy and Regulation**

A well-conducted study can inform local governments and regulatory bodies to enforce stricter health and safety standards in the textile industry, ultimately reducing the occurrence of occupational diseases.

#### **4. Access to Healthcare**

Workers may gain better access to healthcare services tailored to their occupational risks. This could involve regular health check-ups or specialized treatments for conditions related to textile work.

#### **5. Improved Productivity**

Healthier workers tend to be more productive, leading to overall improvements in the industry's output. Reducing absenteeism due to work-related health issues can benefit both workers and employers.

#### **6. Empowerment of Workers**

The study can empower workers to advocate for their rights and demand safer working conditions. Armed with data, they may be able to negotiate for better protections and workplace policies.

#### **7. Long-term Benefits**

Over time, such studies contribute to reducing chronic health conditions and disabilities among workers, thereby improving their quality of life and extending their working years.

#### **8. Economic impact**

Healthier workers mean fewer medical expenses and less financial strain on both the workers and their families, potentially lifting the economic status of households reliant on textile industry jobs.

#### **9. Social Impact**

The study may raise awareness of the social inequities faced by workers in the textile industry, including poor working conditions and low wages, which often exacerbate health problems.

The overall impact is a healthier, more informed, and empowered workforce, which is critical for the sustainability and ethical growth of the textile industry.

## Activities and methods

### 1. Preliminary Activities

**Literature Review:** Review existing studies on occupational health hazards in the textile industry to understand common risks and mitigation strategies.

**Stakeholder Consultation:** Meetings with industry stakeholders, including employers, workers, union leaders, and health experts, to identify concerns and objectives for the study.

**Ethical Approvals:** Securing ethical approvals from relevant authorities or institutional review boards, ensuring workers' rights and confidentiality.

### 2. Workplace Assessment

**Site Visits:** Conduct on-site inspections of textile manufacturing units to observe work conditions, machinery, and processes that may pose health risks.

**Risk Identification:** Identify potential occupational hazards, such as chemical exposures (dyes, solvents), noise levels, ergonomic issues (repetitive strain), dust particles, and temperature extremes.

**Checklist Development:** Develop or use existing checklists for evaluating occupational hazards in textile settings.

### 3. Data Collection Methods

#### a. Worker Health Surveys

**Questionnaire Design:** Prepare structured questionnaires or interviews to gather data on worker demographics, health status, occupational history, and self-reported symptoms or illnesses.

**Health History Surveys:** Ask about pre-existing conditions, exposure to specific chemicals, and ergonomic issues related to repetitive tasks.

**Sample Size:** Determine a statistically significant sample size of workers to ensure representativeness. Random or stratified sampling methods can be used.

#### b. Physical and Environmental Monitoring

**Air Quality Sampling:** Collect air samples to measure concentrations of dust, fibers, and chemical pollutants (e.g., formaldehyde, dyes, and solvents).

**Noise Level Measurement:** Use sound level meters to measure workplace noise, especially near machinery like spinning or weaving machines.

**Temperature and Humidity Monitoring:** Measure heat and humidity in various sections of the textile unit, especially in areas like dyeing or finishing where heat exposure may be higher.

**Chemical Exposure Tests:** Collect samples from the working environment (air, surfaces) to test for hazardous chemicals used in textile production (e.g., azo dyes, formaldehyde).

#### c. Biological Sample Collection (optional)

**Blood and Urine Tests:** Collect biological samples from workers to test for elevated levels of chemicals (e.g., lead, formaldehyde) that may indicate exposure to toxic substances.

**Spirometry:** Conduct lung function tests (spirometry) to assess workers for respiratory issues such as chronic obstructive pulmonary disease (COPD) or asthma caused by exposure to textile dust.

Skin Examinations: Check for skin conditions such as dermatitis, common in workers exposed to chemicals.

#### **4. Health Check-ups and Clinical Examinations**

On-site Medical Examination: Conduct medical check-ups, including hearing tests, vision assessments, skin examinations, and musculoskeletal evaluations.

Occupational History Analysis: Review workers' occupational history (years of service, specific job roles) to assess correlations between job type and health issues.

Psychosocial Assessment: Evaluate stress levels, mental health, and fatigue, particularly among workers engaged in repetitive, monotonous tasks.

#### **5. Interviews and Focus Group Discussions**

Worker Interviews: Conduct in-depth interviews with a subset of workers to explore perceived health risks, coping mechanisms, and workplace conditions.

Focus Groups: Hold focus group discussions with workers, supervisors, and health officials to gather qualitative insights on health hazards and potential solutions.

#### **6. Ergonomic Assessment**

Workplace Ergonomics Evaluation: Analyze workers' posture, repetitive motions, and workstation setup to identify ergonomic risks that may contribute to musculoskeletal disorders.

Job Task Analysis: Break down specific tasks in production processes (e.g., sewing, spinning, dyeing) to identify activities that put workers at risk for repetitive strain injuries.

#### **7. Data Analysis**

Health Risk Assessment: Analyze the collected data to estimate the prevalence and severity of health risks, using statistical methods to identify significant correlations.

Exposure-Response Relationship: Assess the relationship between the extent of exposure (e.g., chemical levels, noise) and the health outcomes observed in workers.

Occupational Hazard Indexing: Rank the identified health risks to prioritize areas for intervention.

#### **8. Recommendations and Reporting**

Intervention Planning: Based on findings, recommend specific interventions such as engineering controls (e.g., ventilation), administrative controls (e.g., work rotation), and personal protective equipment (PPE).

Policy Recommendations: Suggest policy changes at the company or regulatory level, such as stricter enforcement of safety standards or periodic health monitoring.

Training Programs: Recommend training for workers on occupational health, use of PPE, and safe handling of chemicals and equipment.

Final Report: Compile a detailed report summarizing the study's findings, conclusions, and recommended actions.

#### **9. Follow-up**

Health Monitoring Program: Establish a follow-up health monitoring program for workers exposed to hazardous conditions.

Reassessment: Conduct periodic reassessments to evaluate the effectiveness of the implemented interventions.

These activities and methods ensure a comprehensive understanding of the occupational health risks faced by textile workers and help develop effective interventions to mitigate those risks.

## **Execution of activities and methods**

### **1. Geographical area**

Major textile hubs in Odisha such as Berhampur, Sambalpur and Cuttack.

### **2. Industries covered**

Large-scale textile mills, small handloom industries, and garment manufacturing units (three units one each from Maniabandha Cuttack, Berhampur and Sambalpur).

### **3. Target population**

Workers in various roles (50 weavers, 10 machine operators, 25 dyers, 15 packers) and across genders (60 males, 40 females).

### **4. Study design**

Type of study : cross-sectional and longitudinal observational study will be conducted.

Approach : both quantitative (survey, health assessments) and qualitative (interviews, case studies).

### **5. Sampling**

Sampling size : aim for a sample size of 100 workers across different textile units for sufficient representation.

Sampling method : stratified random sampling to cover different roles, genders, and age groups within the textile industry.

### **6. Data collection methods**

Surveys: structured questionnaires to gather data on health issues, working hours, safety protocols, and protective gear use.

Health assessments: collaboration with local health professionals to assess physical conditions (lung function tests, skin evaluations, etc).

Interviews: in-depth interviews with workers, supervisors, and management to gain insights into health hazards and safety practices.

Workplace observations: on-site visits to observe working conditions, machinery, and potential hazards.

### **7. Key variables to study**

Health issues: respiratory problems (due to dust, fibers), skin disorders (contact dermatitis from chemicals), musculoskeletal problems (from repetitive tasks), etc.

Workplace hazards: exposure to harmful chemicals (dyes, solvents), poor ventilation, noise pollution, long working hours, improper ergonomic setups.

Safety measures: Availability and use of protective gear, training in occupational safety, access to medical facilities.

### **8. Timeline**

**Month 1–2:** Literature review, finalization of research design, ethical approvals, and pilot study.

**Month 3–5:** Data collection through surveys, interviews, and health assessments.

**Month 6–8:** Data analysis and interpretation.

**Month 9–10:** Drafting findings, recommendations, and feedback from stakeholders.

**Month 11-12 :** Final report writing and dissemination of results through workshops, presentations, and publications.

## **Techniques employed to secure access**

### **1. Formal approaches through official channels**

Request Letters to Industry Associations: We will reach out to textile industry associations or unions to introduce the study and request their support in facilitating access to factories.

Government or Regulatory Agency Endorsement: We propose to collaborate with government bodies such as the Ministry of Labor, Occupational Health and Safety departments, KIIM University or local regulatory authorities. Their involvement can lend credibility and authority to our request.

Institutional Endorsement: Use backing from a recognized institution (e.g., university, research institute,) to approach textile companies, emphasizing the study's scientific value and potential benefits.

### **2. Partnerships with labor unions**

**Engage Worker Unions:** Contact textile worker unions or labor advocacy groups. Unions can help negotiate access on behalf of workers and often advocate for occupational health improvements, aligning their goals with our study.

**Union Meetings and Presentations:** Present our study at union meetings or gatherings, highlighting the importance of improving workplace health and safety. Union leaders can then use their influence to facilitate entry into factories.

### **3. Corporate Social Responsibility (CSR) Alignment**

**Leverage CSR Programs:** Many textile industries have Corporate Social Responsibility (CSR) initiatives focused on worker welfare. Position our study as a contribution to their CSR objectives, offering to share findings that could benefit their health and safety practices.

**Highlight Mutual Benefits:** Emphasize how the study could help the company improve workplace conditions, reduce absenteeism, and boost worker morale and productivity, which aligns with their long-term business interests.

### **4. Engage Health and Safety Committees**

**Internal Occupational Health and Safety Committees:** Many companies have internal health and safety committees. Collaborate with these committees to gain access to the workplace.

### **5. Engagement of Key Stakeholders**

**Top Management:** Directly approach senior management (CEOs, plant managers) to explain the benefits of participating in the study. Highlight how it can help improve compliance with national or international health and safety standards.

**Human Resource Departments:** The HR department is often responsible for employee well-being and health programs. Approaching HR managers can help navigate internal protocols for gaining access to workers and workplace environments.

### **6. Build trust through transparency**

**Clear Study Objectives and Scope:** Be transparent about the study's goals, methods, and potential outcomes. Provide a clear explanation of what the study will involve (e.g., interviews, health assessments, environmental sampling) and how data will be used. Assure confidentiality and protection of company information.

**Informed Consent from Workers:** Make it clear to both management and workers that participation in the study is voluntary and based on informed consent, ensuring ethical standards are met.

**Non-Disruptive Approach:** Assure industry stakeholders that the study will not interfere with production or day-to-day operations, and outline steps for minimizing disruption.

### **7. Leverage previous relationships or networks**

**Use Existing Contacts:** Our team has prior experience working with textile industries under MSME Department or similar organizations, we will leverage those relationships to facilitate introductions to potential participants.

### **8. Provide incentives or collaborations**

**Offer Feedback and Results:** Companies may be more willing to participate if they know they will receive detailed feedback or a report on the study's findings. Highlight how these findings can help improve workplace safety and reduce occupational health risks.

**Free Health Screenings or Medical Camps:** Offering free health screenings, check-ups, or medical camps for workers in exchange for study access can be an attractive incentive for companies, especially those concerned with worker health but lacking resources for medical assessments.

**Training Programs:** Offer to conduct health and safety training for workers based on the study's findings. Companies may see this as an added value to their participation.

### **9. Highlight compliance with national and international standards**

**Link to Regulatory Requirements:** Emphasize how the study could help the company comply with national occupational health regulations or international standards such as ISO 45001 (Occupational Health and Safety Management Systems).

International Certifications: If the textile company exports goods, highlight how improved worker health conditions can contribute to certifications or approvals from international buyers concerned with labor standards (e.g., fair trade certifications).

#### **10. Offer confidentiality and anonymity**

Data Confidentiality Agreement: Reassure the company that the study's results will protect the anonymity of both the company and the workers, unless explicit consent is given to disclose information. Draft a formal confidentiality agreement if necessary.

Non-Publication of Sensitive Data: Offer assurances that any sensitive data related to the company's operations or trade secrets will not be published or used outside the scope of the research.

By employing a combination of these techniques, you can build trust with textile industry stakeholders and increase the likelihood of gaining access to conduct your occupational health study.

# Planned collaborations

## 1. Academic and Research institutions - Centre for Occupational Health - KIIT University

Role: Provide expertise in study design, data collection, analysis, and reporting.

Scientific rigor and peer-reviewed methodologies.

Access to laboratory facilities for testing biological samples (e.g., blood, urine) or environmental samples (e.g., air, dust) in KIMS Hospital .

Data analysis and publication of findings in scientific journals.

Assistance with ethical approvals and adherence to research standards.

## 2. Government Agencies and Regulatory Bodies

Role: Government bodies, such as the Ministry of Labor, Ministry of Health, can offer regulatory support, policy frameworks.

Access to industry data and worker demographics.

Regulatory frameworks and compliance guidelines for occupational health standards.

Policy enforcement and assistance with advocacy for workplace reforms based on study findings.

Public health resources or funding for large-scale studies.

## 3. Jeevanrekha Parishad -JRP (NGOs)

Role: JRP working in health, labor rights, or environmental protection can be valuable partners in gaining access to communities and raising awareness about occupational health issues.

Community outreach and worker engagement.

Advocacy for policy changes based on study results.

Training and capacity-building programs for workers and employers.

Resources for running health camps or workshops related to the study.

## 4. Textile Industry Associations and Labor Unions

Role: Industry associations and labor unions can facilitate access to factories and workers, provide input on the practical challenges workers face, and help with study logistics.

Access to member companies and worker networks.

Input on the design of worker surveys and feedback mechanisms.

Advocacy for industry-wide occupational health improvements.

Partnership in implementing workplace interventions based on study results.

## 5. Private Sector (Textile Companies)

Role: Textile companies are both the focus and key collaborators in the study. Their participation ensures access to work environments, employees, and real-time data.

Access to workplace facilities for environmental monitoring (air quality, noise, temperature) and worker health assessments.

Provision of workplace safety data and participation in interviews or focus groups.

Implementation of pilot programs to improve workplace safety based on the study's findings.

Collaboration in post-study interventions like worker training and PPE distribution.

## 6. Local Health Authorities

Role: Local health departments or municipal health offices can offer support with health data collection, provision of healthcare services, and worker health screenings.

Access to local health statistics, which can inform the baseline health conditions of textile workers.

Provision of medical staff or resources for worker health screenings and interventions.

Support for follow-up health monitoring after the study.

## 7. Media and Advocacy Groups

Role: Media outlets and advocacy groups can assist in policy advocacy based on the findings of the study.

# Expectations and deliverables

## 1. Expectations from the Study

### a. From Researchers/Study Team:

**Comprehensive Risk Identification:** The study is expected to identify key occupational health hazards faced by textile workers, such as exposure to chemicals, dust, ergonomic strain, and noise.

**Accurate Data Collection:** Conduct accurate and systematic data collection, including health assessments, environmental monitoring, and worker surveys, ensuring that results are representative of the target population.

**Ethical Conduct:** Ensure ethical standards are followed, including obtaining informed consent from participants, protecting worker privacy, and avoiding harm.

**Scientific Rigor:** The study should adhere to scientific principles and employ validated methods of data collection and analysis. This includes designing a methodology that ensures reliability and validity.

**Stakeholder Involvement:** Researchers are expected to actively engage with all relevant stakeholders (industry, workers, unions, health professionals) to ensure cooperation and access to the work environment.

### b. From Textile Industry/Employers:

**Access to Workplaces:** Employers are expected to provide access to factories, production lines, and workers for data collection (e.g., interviews, environmental monitoring).

**Support for the Study:** They should support the study by facilitating logistics, such as setting up appointments, allowing worker participation during working hours, and ensuring a non-disruptive environment for research.

**Collaboration on Interventions:** If health hazards are identified, industry management should be open to collaborating on interventions and making improvements to working conditions.

### c. From Workers/Unions:

**Participation and Feedback:** Workers are expected to participate in the study by providing honest feedback through surveys, interviews, and health assessments. Union representatives are expected to facilitate communication between workers and researchers.

**Advocacy for Change:** Workers and their representatives should advocate for the implementation of recommendations based on study findings to improve workplace safety.

### d. From Collaborators (e.g., Government, NGOs):

#### Policy Support

An evaluation plan is essential for measuring the achievement of goals in an occupational health study in textile industries. Below is a comprehensive evaluation plan based on the typical phases of an occupational health study.

# Evaluation plan

## 1. Define the Study's Goals and Objectives

Before creating an evaluation plan, clearly define the study's overarching goals. These may include:

Identifying occupational health hazards (e.g., chemical, physical, ergonomic hazards) in textile industries.

Assessing the health impact on workers, such as respiratory issues, musculoskeletal disorders, and exposure-related diseases.

Developing and recommending interventions to reduce health risks.

Improving workplace health and safety practices and policies within textile factories.

Raising awareness among workers about occupational health risks and preventive measures.

## **2. Develop Evaluation Criteria**

Evaluation criteria should be based on the specific objectives of the study and measurable outcomes. The criteria could include:

**Occupational Hazard Identification:** Number of hazards identified, measured levels of exposure, and types of risks categorized (e.g., chemical exposure, noise levels, ergonomic stress).

**Worker Health Assessment:** Changes in the prevalence of health issues among workers (e.g., before and after the study), self-reported symptoms, and medical test results (e.g., lung function tests, hearing assessments).

**Workplace Safety Interventions:** Implementation and effectiveness of recommended interventions (e.g., PPE use, ventilation improvements, ergonomic modifications).

**Policy and Procedure Changes:** Number and quality of new or improved workplace policies related to health and safety.

**Awareness and Training:** Worker participation in health and safety training programs and changes in knowledge or behavior as a result of the study's awareness-raising efforts.

## **3. Key Performance Indicators (KPIs)**

Based on the criteria above, define Key Performance Indicators (KPIs) to measure the success of each study objective. Here's a list of KPIs to track for different areas of the study:

### **a. Exposure to Workplace Hazards:**

**KPI:** Percentage of identified workplaces where hazard exposure (e.g., air pollutants, noise) is reduced to acceptable levels according to regulatory standards.

**KPI:** Number of factories with adequate workplace monitoring systems in place (e.g., regular air quality and noise assessments).

**KPI:** Average reduction in exposure levels (e.g., dust, chemicals) after interventions.

### **b. Worker Health Outcomes:**

**KPI:** Percentage reduction in reported occupational health issues (e.g., respiratory diseases, skin allergies) among workers over the course of the study.

**KPI:** Number of workers who undergo health screenings and participate in medical evaluations.

**KPI:** Improvement in measurable health indicators (e.g., lung function, musculoskeletal health)

# **Enhancement of OHS capacity**

## **1. Enhancing Awareness and Knowledge of Workplace Hazards**

**Workers:** The study will raise awareness among textile workers about common occupational hazards (e.g., chemical exposure, dust, noise, repetitive strain). Through health screenings, educational materials, and training, workers will learn to identify hazards and take preventive measures (e.g., proper use of personal protective equipment or PPE).

**Management:** Factory management will gain a deeper understanding of specific risks within their operations and how they affect worker health. This knowledge helps in designing more effective OHS policies and improving workplace conditions.

**Government and Regulators:** Government agencies involved in labor and safety regulation will have access to data on occupational hazards specific to the textile industry. This knowledge supports the creation or updating of safety regulations, inspection protocols, and enforcement mechanisms.

## **2. Strengthening OHS Policies and Procedures**

**Improved Risk Management:** The study will help identify specific risks in textile workplaces and offer evidence-based recommendations for risk mitigation. This could involve implementing better ventilation systems, ergonomics, or noise-reduction measures. These findings will lead to updated and more robust safety procedures.

**Development of OHS Programs:** Textile companies can establish or refine their OHS programs based on study results. This includes creating safety protocols for high-risk tasks, setting up health monitoring systems, and developing clear emergency response plans.

### **3. Building Capacity for Hazard Monitoring and Control**

**Environmental monitoring:** The study will introduce textile companies to methods for monitoring workplace hazards, such as air quality assessments, noise level monitoring, and ergonomic evaluations.

## **Resources required to complete the project**

To develop a resource plan for a one-year occupational health study in textile industries covering three factories and 100 workers with a budget of 4,000 USD, we will carefully allocate resources across key categories such as personnel, materials, data collection, health assessments, and reporting. Below is a detailed breakdown of how to efficiently use the 4,000 USD budget to cover the study.

### **1. Personnel Costs (40% of total budget = 1,600 USD)**

Personnel is crucial for managing and conducting the research study, including data collection, health assessments, training, and reporting.

#### **a. Principal Investigator (PI) or Study Coordinator:**

**Role:** Oversees the entire study, ensures that timelines are met, coordinates with factories, workers, and stakeholders, and leads report writing.

**Cost:** 400 USD for the year (part-time role).

#### **b. Field Researchers (2 personnel):**

**Role:** Conduct on-site data collection, interviews, surveys, and assist in health assessments and monitoring.

**Cost:** 2 researchers at 400 USD each = 800 USD (part-time for a year).

#### **c. OHS Expert Consultant:**

**Role:** Provides technical expertise in occupational health and safety, advises on study design, and recommends interventions.

**Cost:** 400 USD (consulting fee for the entire year on an as-needed basis).- Contribution of Centre for Occupational Health, KIIT University .

### **2. Data Collection and Fieldwork Expenses (20% of total budget = 800 USD)**

Fieldwork involves site visits to the textile industries for data collection and assessment of worker health, hazards, and workplace conditions.

#### **a. Travel and Transportation Costs:**

**Role:** Covers transportation for researchers and OHS experts to travel to three textile industries for site visits, worker interviews, and environmental monitoring.

**Cost:** 500 USD (local transportation for site visits over the year).

#### **b. Data Collection Materials:**

**Role:** Includes survey forms, interview guides, notebooks, digital tablets (if required), and stationery.

**Cost:** 200 USD for printing, copying, and digital data recording tools.

#### **c. Personal Protective Equipment (PPE):**

Role: PPE for the research team during site visits (e.g., masks, gloves, and protective clothing if necessary).

Cost: 100 USD.

### **3. Worker Health Assessments (15% of total budget = 600 USD)**

To evaluate the health conditions of the 100 workers, basic health assessments will be conducted with a focus on key occupational health risks.

#### **a. Medical Check-ups:**

Role: Basic health screening of 100 workers, focusing on common occupational health issues (respiratory problems, musculoskeletal disorders, skin conditions).

Cost: 500 USD (approx. 5 USD per worker for basic screening).- contribution from Government Health Department .

#### **b. Diagnostic Tools and Health Monitoring Equipment:**

Role: Rent or purchase necessary equipment such as lung function testers, ergonomic assessment tools, or noise level meters.

Cost: 100 USD (basic diagnostic tools for site visits).- Contribution of Kalinga Institute of Medical Sciences, KIIT University through Centre for OH.

### **4. Training and Awareness Campaigns (10% of total budget = 400 USD)**

A portion of the budget will be allocated to training workers and management on the study's findings, workplace safety practices, and preventive measures.

#### **a. Worker Training Workshops:**

Role: Conduct 3 training sessions (one per factory) on occupational hazards, PPE usage, and safety measures.

Cost: 300 USD (100 USD per session for materials, refreshments, and local trainer).

#### **b. Educational Materials:**

Role: Design and distribute educational brochures or posters to workers on occupational health and safety.

Cost: 100 USD for printing and distribution.

### **5. Equipment and Monitoring (10% of total budget = 400 USD)**

Monitoring equipment is essential to assess workplace hazards (e.g., air quality, noise levels) during the study.

#### **a. Air Quality and Noise Monitoring:**

Role: Hire equipment to monitor environmental factors like dust, fumes, and noise levels in each factory.

Cost: 300 USD for renting air quality meters and noise level detectors.

#### **b. Workplace Ergonomics Assessment Tools:**

Role: Use simple ergonomic tools (e.g., goniometers, force gauges) to assess worker posture, repetitive movements, and lifting techniques.

Cost: 100 USD (rental or purchase of ergonomic tools).

### **6. Reporting and Documentation (5% of total budget = 200 USD)**

Finalizing the research study includes preparing reports, disseminating findings, and presenting the results to stakeholders.

#### **a. Report Writing and Publication:**

Role: Drafting the final report, printing, and distributing it to stakeholders (e.g., industry representatives, labor unions, government).

Cost: 150 USD for report design, printing, and dissemination.

#### **b. Stakeholder Presentation/Dissemination Meeting:**

Role: Organizing a final dissemination meeting with stakeholders to present the study's findings.

Cost: 50 USD for venue and refreshments.

Contingency (5% of total budget = 200 USD)

A small contingency fund to cover unforeseen expenses such as additional travel, equipment maintenance, or emergency medical assessments.

Cost: 200 USD.

**Summary of Resource Plan (4,000 USD Total)**

**Less USD 1000 from Centre for OH, KIMS –**

**Grant Required from DWOI – USD 3000**

**Discuss any problems you anticipate in securing these resources (if any) and how you plan to resolve them.**

We do not foresee any challenges we may face in obtaining these resources. Centre for OH, KIIT University has agreed to provide support in kind and Health department, Government of Odisha has also agreed to conduct three health camps in three Textile industries in collaboration with ESI hospital. So USD 1000 in kind will be mobilized for the purpose .

**Do you anticipate needing advice or assistance from DWOI? If so, please discuss it briefly here.**

We may need expert consultation for guidance or expertise associated with DWOI for designing questionnaires and other tools and techniques of the study.

## **Detailed timeline**

### **Month 1-2: Planning and Preparation**

#### **1. Project Kickoff Meeting:**

Organize a meeting between all stakeholders: KIIT University, Health Department, textile industry representatives, and local authorities.

Define roles, responsibilities, and deliverables for each partner.

#### **2. Research Design and Ethical Approvals:**

Finalize the study objectives, methods (surveys, interviews, medical evaluations, etc.), and population sampling.

Obtain ethical clearance from the institutional review board (IRB) at KIIT University.

Submit necessary permissions and approvals to the Health Department and the textile industry association.

#### **3. Logistics and Resources:**

Allocate budget, procure equipment, and assemble the research team.

Arrange transportation, access to medical staff, and necessary lab facilities for health screenings.

### **Month 3-5: Data Collection Phase 1**

#### **1. Pilot Study (1st Month):**

Conduct a small-scale pilot study in selected textile industries to test the study design and tools (e.g., questionnaires, health screening procedures).

Review and adjust the methodology if needed.

#### **2. Survey and Screening of Workers (Months 2-3):**

Conduct surveys and interviews on working conditions, work hours, and health concerns.

Perform medical screenings (lung function tests, skin examinations, etc.) to evaluate common occupational health issues (e.g., respiratory conditions, musculoskeletal problems).

## Month 6-7: Data Collection Phase 2

### **1. Comprehensive Data Collection:**

Expand the study to cover the broader population in the textile industry.

Focus on different categories of workers (e.g., machine operators, weavers, supervisors) to get a holistic understanding of health impacts.

### **2. Engagement with Stakeholders:**

Hold mid-project review meetings with the Health Department, KIIT University, and industry stakeholders.

Collect feedback from industry representatives and workers to refine the research approach if necessary.

## Month 8-9: Data Analysis and Interpretation

### **1. Data Cleaning and Analysis:**

Use statistical methods to analyze survey data (e.g., incidence of occupational diseases, risk factors).

Conduct comparative analysis between various worker categories (gender, experience, job roles).

### **2. Medical Report Interpretation:**

Analyze medical screenings and correlate findings with working conditions.

Engage health experts from KIIT University and the Health Department to interpret results.

## Month 10-11: Report Writing and Recommendations

### **1. Draft Research Report:**

Prepare the preliminary report, summarizing key findings (e.g., health risks, work-related illnesses, gaps in safety measures).

### **2. Policy and Health Recommendations:**

Collaborate with the Health Department to draft health policy recommendations or interventions for the textile industry (e.g., improved ventilation, health camps, protective gear).

Discuss results with industry representatives and suggest practical solutions to mitigate health risks.

## Month 12: Dissemination and Follow-up

### **1. Stakeholder Workshop:**

Organize a workshop or seminar to present the findings to all stakeholders: textile industry officials, government representatives, health professionals, and workers.

Share the final research report and recommendations.

### **2. Publication and Follow-Up:**

Submit the findings to academic journals and present them at national or international conferences.

Plan follow-up studies or interventions based on the study's recommendations (e.g., periodic health checks, awareness programs).

This timeline ensures that each phase of the research is meticulously planned and executed, with active participation from both KIIT University (CfOH) and the Health Department throughout the year.

# Budget

## Supporting information

### 1. Dr. Pratyush Mishra

The Chief Investigator of this study is a Hematopathologist at Tata Memorial Hospital, specializing in the diagnosis of hematologic malignancies and disorders. With extensive experience in bone marrow pathology, flow cytometry, and molecular diagnostics, he plays a crucial role in the evaluation and management of blood cancers such as leukemia, lymphoma, and myeloma. Dr. Mishra is actively involved in clinical research, contributing to advancements in hematopathology and personalized treatment strategies. He holds an MD in Pathology and has been recognized for his work in the integration of cutting-edge diagnostic techniques in cancer care.

### 2. Dr. Pravat Kumar Satpathy, MD, MPH- Research Consultant

He is an Occupational Health Physician with over 05 years of experience in providing workplace health assessments, managing occupational injuries, and promoting workplace well-being in KIMS Hospital, Bhubaneswar. Expertise in conducting risk assessments, developing preventive health programs, and advising on occupational hazards. Skilled in regulatory compliance, health surveillance, and workplace ergonomics. Strong focus on employee health and safety, reducing workplace injury, and improving productivity through health interventions. At present working as Head of Department Centre for Occupational Health, KIIT University and KIMS Medical College, Bhubaneswar.

### 3. Dr. Manoranjan Mishra

He will act as Research Coordinator of this research study. He is the Director of Jeevanrekha Parishad (JRP), Odisha, where he leads initiatives focused on Occupational Health, Environment Health, sustainable development, environmental conservation, and community empowerment. With over two decades of experience in development work, Dr. Mishra has been instrumental in implementing projects related to Occupational and Environmental Health, climate resilience, smart farming, and tribal welfare across Odisha. His leadership has fostered strong collaborations with national and international organizations, medical colleges, driving impactful programs that address the socio-economic needs of marginalized communities. Dr. Mishra holds expertise in grassroots mobilization, policy advocacy, and capacity building.

## Organization

Jeevanrekha Parishad (JRP) focuses on improving occupational and environmental health through a variety of initiatives. It conducts awareness programs on workplace safety, particularly for marginalized communities involved in hazardous occupations such as agriculture, brick kilns, and stone quarries. JRP also addresses environmental health by promoting sustainable agricultural practices, combating deforestation, and advocating for pollution control. Their efforts include the implementation of clean energy solutions, water conservation techniques, and waste management systems, which aim to reduce environmental risks and improve the quality of life in rural and tribal regions of Odisha. JRP has conducted several research studies on occupational Health with the support of DWOI, OKI- USA,

WPHWB- Canda, Toxic Links, IIPN etc. Besides conducting series of policy level workshops with their support.

<b>Budget and justification</b>			
<b>From 15/01/2025</b>		<b>Through 15/01/2026</b>	
<b>Category</b>	<b>Details</b>	<b>Cost (USD)</b>	<b>Contribution</b>
<b>Personnel Costs (40% of total budget)</b>		<b>1,600</b>	
a. Principal Investigator (PI)/Coordinator	Oversees the study, coordinates stakeholders, leads reporting.	400	
b. Field Researchers (2 personnels)	Conducts on-site data collection, interviews, assists in health assessments.	800	
c. OHS Expert Consultant	Provides technical expertise, advises on study design and interventions.	400	Centre for OH, KIIT University
<b>Data Collection &amp; Fieldwork (20%)</b>		<b>800</b>	
a. Travel and Transportation	Local travel for site visits, worker interviews, and environmental monitoring.	500	
b. Data Collection Materials	Includes survey forms, interview guides, digital tablets, and stationery.	200	
c. Personal Protective Equipment (PPE)	Masks, gloves, and protective clothing for the research team.	100	
<b>Worker Health Assessments (15%)</b>		<b>600</b>	
a. Medical Check-ups	Basic health screening for 100 workers, focusing on occupational health issues.	500	Government Health Department contribution
b. Diagnostic Tools & Equipment	Rent/purchase of lung function testers, ergonomic tools, noise level meters.	100	Kalinga Institute of Medical Sciences (KIMS), KIIT University, Centre for OH
<b>Training &amp; Awareness Campaigns (10%)</b>		<b>400</b>	
a. Worker Training Workshops	3 sessions on occupational hazards, PPE usage, and safety measures.	300	
b. Educational Materials	Brochures and posters on occupational health and safety.	100	
<b>Equipment &amp; Monitoring (10%)</b>		<b>400</b>	

a. Air Quality and Noise Monitoring	Rental of equipment to monitor environmental hazards (dust, fumes, noise levels).	300	
b. Ergonomics Assessment Tools	Rental/purchase of tools to assess posture, repetitive movements, and liftings techniques.	100	
<b>Reporting &amp; Documentation (5%)</b>		<b>200</b>	
a. Report Writing & Publication	Drafting, printing, and distributing the final report.	150	
b. Stakeholder Presentation Meeting	Organizing a dissemination meeting to present findings.	50	
Total Budget		4,000	
Grant Required from DWOI		3,000	
LESS Local contribution		1,000	

Justification (please provide brief explanations for budget items, as needed):

Justification has been provided in resource planning and also in the above budget table.