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# ECONOMIC HARDSHIPS AND WORKPLACE WELLNESS AMONG HANDLOOM WEAVERS

### Investigators

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Ms.S.Jebasheela Jenifer

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New Delhi

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## **CHAPTER -I- CONCEPTUAL FRAMEWORK**

*“The handloom weaving is in a dying condition. Everybody allows that whatever may be the future of the mill sector, the handloom ought not to be allowed to perish.”*

**-Mahatma Gandhi**

### **1.0.Introduction**

Handloom weaving in India stands as a living embodiment of the nation's cultural legacy and traditional craftsmanship, with roots tracing back to the Indus Valley Civilization. As a decentralized and labour-intensive sector, it continues to play a pivotal role in sustaining rural livelihoods, especially in economically marginalized regions. The handloom sector directly and indirectly supports nearly 12 million artisans and is second only to agriculture in terms of employment generation (National Handloom Development Corporation, 2021). Characterized by artistic expression, environmental sustainability, and low energy consumption, handloom textiles reflect centuries-old indigenous knowledge and cultural values (Ministry of Textiles, 2020; Handloom Export Promotion Council, 2019).

Despite its heritage and economic significance, the handloom sector remains underdeveloped due to systemic neglect and minimal policy support. Colonial exploitation and post-independence industrialization led to a sharp decline in the viability of traditional handloom practices. The rise of mechanized production, lack of modern infrastructure, and irregular access to raw

materials have left rural artisans struggling to survive (Roy, 2007; Chattopadhyay, 2018). Institutional structures like cooperatives and master-weaver systems dominate the industry, yet many cooperatives have failed to safeguard weavers' welfare, pushing them toward exploitative intermediaries (Kumudha and Rizwana, 2013; Dev, 2008).

The economic hardships faced by handloom weavers are multifaceted. Low and inconsistent incomes, lack of access to credit, poor housing conditions, and limited educational opportunities create a cycle of poverty that is hard to break. Many weavers are dependent on middlemen who control the prices and distribution networks, further diminishing their earnings. The seasonal nature of weaving, market volatility, and lack of direct market access exacerbate their economic instability. Additionally, women weavers, who constitute a significant portion of the workforce, face gender-based disparities in wages, workload, and access to decision-making roles within cooperative societies.

Moreover, workplace wellness remains a critical yet overlooked issue in this informal sector. Weavers, especially women, often work from home in ergonomically unsafe environments, leading to musculoskeletal disorders, vision problems, respiratory ailments, and premature aging due to physical strain and nutritional deficiencies (Kumar and Karmakar, 2018; Siddiqui et al., 2021). The absence of ergonomic

interventions, healthcare access, and occupational safety awareness exacerbates their health risks and economic vulnerability (Stalin et al., 2024; Anjani, 2025). These health issues are compounded by inadequate health infrastructure in rural areas, lack of insurance coverage, and a general lack of health literacy among artisan communities.

Handloom weaving involves continuous and repetitive physical activity such as pedal operation, hand beating, and intricate pattern weaving, often conducted in poorly ventilated, cramped, and dimly lit spaces. Such conditions not only affect physical health but also lead to chronic fatigue, mental stress, and reduced productivity. Weavers also face psychological distress due to financial insecurities, uncertain employment, and the generational decline in the interest among youth to pursue traditional crafts. These factors contribute to a weakening of the industry's sustainability and the erosion of cultural heritage.

Technological backwardness also plays a crucial role in the stagnation of the sector. With little access to modern looms, dyeing techniques, or design software, handloom artisans are often unable to meet contemporary consumer demands or compete with cheaper, machine-made alternatives. While government schemes such as the National Handloom Development Programme (NHDP) and various cluster development initiatives aim to uplift the sector, the outreach and effectiveness of such

programs are limited by bureaucratic inefficiencies and lack of grassroots engagement.

It is evident that a comprehensive, multi-pronged approach is necessary to revitalize the handloom sector. This includes not only enhancing market linkages and access to raw materials but also ensuring health and wellness of the workforce. Ergonomic interventions, health awareness programs, access to affordable healthcare, and social protection schemes must become integral components of any developmental strategy. Furthermore, empowering weavers through education, training, and digital literacy can pave the way for self-sustaining artisan communities that can thrive in both domestic and international markets.

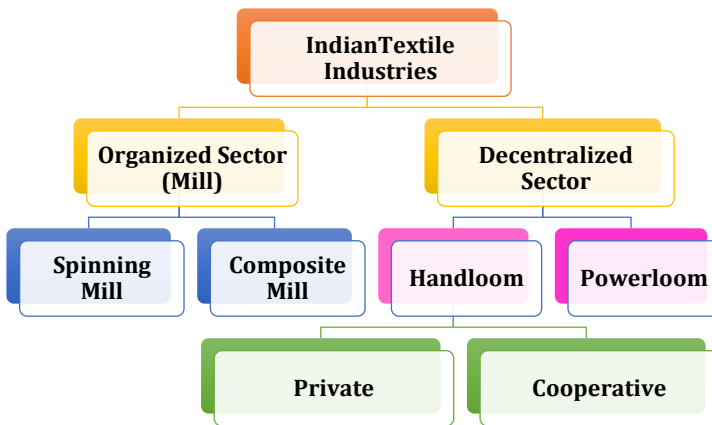
Thus, understanding the intersection of economic hardships and workplace wellness among handloom weavers is essential for crafting policies that are inclusive, equitable, and sustainable. The preservation of India's rich handloom tradition depends not only on the survival of its artisans but also on the quality of life they lead while practicing this time-honoured craft.

### **1.1. Organization of the Indian Textile Industry**

The Indian textile industry can be broadly classified into the organized sector and the decentralized sector. The organized sector can be further classified into spinning mills and composite mills. The decentralized textile sector can be further classified into the handloom sector and

power loom sector. The handloom sector works in private or cooperative fold.

*Fig.1.1. Shows the Organization of Indian Textile Industry*



## 1.2. History of the Handloom Industry

The handloom industry in India is one of the oldest forms of textile production, dating back to the Indus Valley Civilization, and it has since evolved into a rich and diverse tradition that reflects regional craftsmanship and cultural identity (Mukherjee, 2020). During the Mughal era, Indian handlooms thrived, gaining global recognition for their fine textures and natural dyes, but British colonial policies and industrial imports caused a steep decline in

indigenous weaving practices (Roy, 2019). However, the handloom sector witnessed a resurgence during India's freedom movement, with Mahatma Gandhi promoting the *charkha* as a symbol of self-reliance and national pride (Chatterjee, 2016).

Post-independence, the government introduced welfare programs and cooperative models to support the handloom industry, which remains crucial for rural employment and cultural preservation (Ministry of Textiles, 2020). Among the prominent handloom regions, Tirunelveli district in Tamil Nadu holds historical and economic importance. The district is home to a significant population of handloom weavers who have preserved traditional weaving techniques over generations, producing cotton saris, towels (*thurkas*), and *veshtis* known for their durability and simple elegance. These weavers, often concentrated in areas like Manur, Sankarnagar, and Pappakudi, typically operate from household looms and contribute to both local consumption and wider domestic markets (Venkateswaran, 2014). Despite the cultural richness of their work, handloom artisans in Tirunelveli face numerous challenges such as low wages, lack of access to modern equipment, inadequate marketing, and stiff competition from power looms. Yet, their commitment to sustaining this heritage through cooperative societies and skill transmission within families underscores the

enduring relevance of the handloom sector in the district's socio-economic fabric (Bhatnagar & Kumar, 2021).

Weavers in India, forming a substantial segment of the rural workforce, are highly vulnerable to occupational health problems, particularly due to the physical demands and poor working conditions of their profession. Common ailments reported among this population include respiratory disorders, chronic diseases such as hypertension, and musculoskeletal issues arising from long hours of static work in awkward positions at traditionally designed looms (Kale, 2008; Anonymous, 2006). The persistent exposure to dust and noise also contributes to long-term health impairments, including allergies, asthma, tuberculosis, and even permanent hearing loss. A study by Kandasamy and Minor (2001) on occupational hazards in textile industries revealed that respiratory conditions were the most prevalent health issue among weavers, with additional symptoms such as throat infections and nasal congestion commonly reported. Malnutrition compounds these health challenges, acting as a major barrier to productive capacity and overall well-being. Poor nutritional intake leads to reduced energy levels, increased susceptibility to infections, and frequent absenteeism, thereby affecting both the individual's income and national productivity. A balanced and nutrient-rich diet is essential to support the physiological and cognitive demands of weaving work. Nutrition not only supports physical health but also

enhances cognitive function, stamina, and resistance to degenerative diseases, all of which are critical to ensuring long-term work efficiency and quality of life among weavers (Francis, 2003).

### **1.3.The Significance and Evolution of Handloom Weaving in India**

Weaving remains the second most important occupation in India, following agriculture. With a history deeply embedded in Indian civilization, handloom weaving has been practiced for centuries, symbolizing not only economic activity but also artistic expression and cultural identity. The use of the charkha (spinning wheel) by Mahatma Gandhi during India's struggle for independence elevated handloom weaving to a symbol of self-reliance and national pride (Shukla, 2014).

Tiwari et al. (2003) emphasized that the textile sector is among the oldest industries in India and continues to hold a dominant position, accounting for around one-fifth of the country's industrial production and nearly 37% of its export revenues. The handloom segment, in particular, is noted for its unique motifs and craftsmanship that reflect the diverse heritage of India's regions (Singh & Naik, 2009). Beyond aesthetics, the textile industry plays a substantial economic role. It contributes approximately 14% to industrial output, 4% to the national GDP, and employs around 45 million people, making it the second-largest employment generator after

agriculture (Ministry of Textiles, Government of India, 2013). Furthermore, handloom weaving stands as a vital rural industry that not only fulfils basic human needs for clothing but also sustains countless livelihoods through generations.

Handloom weaving varies across Indian states. While in regions like Tamil Nadu, Kerala, Odisha, and Assam, it has developed into a matured, structured industry, in other areas it remains largely a household-based activity. The sector is also culturally significant particularly in South India, where handwoven silk sarees form an essential part of traditional marriage rituals. The uniqueness of Indian handloom fabrics lies in their design intricacies and non-replicability by mechanized power looms, thereby contributing over 95% of the world's handwoven textiles (Shanmuga Sundaram & Prakash, 2014). Weaving requires the coordination of vision, precision, and manual dexterity, often involving entire families. Elder members typically undertake skilled tasks, while younger ones assist in ancillary operations. Poor vision and repetitive manual labour can significantly affect productivity and income levels among weaving households (Marmamula et al., 2011).

Despite modern challenges, Indian handloom continues to attract global admiration. As noted by Prachi (2010), its popularity transcends borders due to its aesthetic appeal and unique regional styles, which have often been integrated across different weaving traditions.

Tamil Nadu stands out as a major hub, housing about 25% of India's handlooms and employing over two million individuals, including those involved in support services (Krishna, 2000). The state contributes nearly 50% of India's textile exports.

Babu and Ramesh (2001) identified the handloom sector as the largest unorganized industry in terms of size, employment, and income potential. Approximately 30% of the country's total textile output and 60% of employment in the textile domain stem from this sector. Tamil Nadu, in particular, has a significant share of India's handloom production and weaver population.

More than 300,000 families in Tamil Nadu depend on handloom weaving, which is typically a full-time family vocation (Jayavel, 2013). The state government, in collaboration with the central government, has implemented several schemes to improve the socio-economic conditions of these weavers (Tamil Nadu and Textile Industry, 2011).

Socioeconomic status remains a key determinant of well-being and access to resources. Individuals from economically disadvantaged backgrounds often experience lower life expectancy, limited mobility due to chronic illnesses, and restricted access to healthcare (Spiro, 2001). As Adler and Ostrove (2000) point out, these conditions significantly affect health outcomes, making the socioeconomic context crucial when assessing the quality of life among handloom weavers.

## **1.4.Socio-Economic Hardships of Handloom Weavers**

Despite its cultural richness and historical significance, the handloom sector in India continues to face severe socio-economic challenges. Handloom weavers, particularly those in rural areas such as Tirunelveli and neighbouring districts, are among the most economically vulnerable groups in the informal workforce. Many weavers live below the poverty line, earn irregular incomes, and lack access to formal credit systems or social security benefits (Panda & Bhuwania, 2022). These workers typically depend on middlemen to market and sell their products, which significantly reduces their profit margins. While government schemes exist to support handloom production, such as the National Handloom Development Programme, many weavers remain excluded due to low awareness, bureaucratic hurdles, or lack of cooperative membership (Sivakkolundhu & Sheeba, 2021).

The unpredictability of income in the handloom sector, especially with the rising dominance of power looms and cheap imports, makes it difficult for weavers to sustain basic living standards. A large number of families struggle to afford education, healthcare, or nutritional needs. Studies have shown that weavers often work long hours, yet the average monthly income remains meager compared to the effort and time invested (Prathap & Naidu, 2015). Additionally, the seasonal nature of

demand, especially for traditional garments like sarees, leads to underemployment or prolonged joblessness during off-peak periods.

Moreover, weavers typically lack savings and are frequently indebted to local lenders or traders, further trapping them in cycles of poverty. Aging weavers, particularly those without alternative income sources, are most affected due to reduced productivity and lack of retirement benefits (Maruthakutti & Pelsit, 2024). Women weavers face added hardship due to gender-based wage gaps, unpaid household labour, and limited decision-making power in both family and cooperative settings (IIP Series, 2024).

Addressing these socio-economic hardships requires an integrated policy framework that ensures stable income, market access, health security, and education for weavers' families. Strengthening cooperatives, expanding direct-to-consumer models, and increasing digital literacy can empower weavers to become less dependent on exploitative intermediaries. Without meaningful intervention, the continued marginalization of handloom weavers poses a threat to both rural livelihoods and the survival of traditional textile crafts.

**1.5.Social Factors:** These include: age, gender, social grouping and religion, educational background of weavers and their children, type and size of weaver's

family, dependents, migratory character, health conditions and awareness about health care, level of poverty among the weavers, exposure to mass media and communication, services/amenities enjoyed by the weavers, social participation, occupational preferences of weaver's children, etc.

**1.5.1. Economic Factors:** These include issues such as annual income, type of loom employed, type of cloth produced by the weavers, per capita income of the weavers, type of dwelling unit and category of assets owned by the weavers, expenditure pattern of the weavers, indebtedness and sources of debt, employment details and organizational support for financial assistance, waiving of weaver's loans, possession of ration cards.

**1.5.2. Organisational Factors:** These include a brief account of the various types of weaving mechanisms, viz., independent weavers, weavers working under Master Weavers, and those associated with Cooperative Societies. In addition, the study analyses the extent of governmental support provided for the development of the handloom industry and the enhancement of weavers' living standards. Other factors, such as production and marketing challenges, although significant in influencing the overall plight of weavers, could not be examined in depth within the scope of this study. Furthermore, the information collected through the schedule is presumed to be accurate, and the validity of the respondents'

statements has been verified through cross-checking procedures.

## **1.6.Reserving Cultural Identity and Navigating Economic Challenges in Handloom Weaving**

Handloom weaving is far more than just a method of textile production; it is a living representation of cultural identity and a critical source of livelihood for many rural communities. As one of the oldest surviving traditional crafts, handloom weaving reflects generations of skilled artistry, deeply intertwined with local heritage and social structure. This study aims to explore the complex socioeconomic realities faced by handloom weavers, highlighting the challenges that affect both their personal well-being and the sustainability of their craft. Although the sector holds immense cultural value and contributes meaningfully to local economies, the lives of the weavers are often marked by economic hardships, social invisibility, and lack of institutional support (Panda and Bhuwania, 2022). Their contribution to preserving tradition is seldom matched by equitable income, health care access, or infrastructural development. As the global textile industry rapidly evolves through technology and mass production, handloom weaving finds itself at a critical juncture. This research contributes to the academic discourse by offering a detailed and balanced understanding of the intricate social and economic forces influencing the handloom sector. It also lays a foundation

for policy recommendations that recognize the need to protect this valuable heritage while improving the living conditions of the weavers who uphold it.

### ***1.6.1. Cultural Continuity and Heritage Transmission***

Handloom weaving is deeply embedded in cultural identity and functions as a vital connection between generations. In regions such as Jharkhand and Karnataka, weaving traditions represent more than just craft they embody the stories, rituals, and community values passed down within artisan families (Costa et al., 2020; Vijayakumar, 2023). A quantitative study in Jharkhand showed that 85 percent of weavers considered their craft central to the preservation of local traditions and social bonds (Costa et al., 2020). With younger generations turning to other professions, the survival of this heritage is under threat. However, initiatives such as Geographical Indication (GI) tags have offered a mechanism for preserving the distinctiveness and territorial identity of handloom textiles. For example, the GI recognition of Khasi Ryndia cloth in Meghalaya has protected its authenticity and helped uplift the status of weavers (Government of Meghalaya, 2025; Meena and Janani, 2018). Thus, handloom weaving plays a dual role as a keeper of cultural heritage and as a means of socioeconomic survival.

### ***1.6.2. Economic Pressures from Market Dynamics***

The rising preference for machine-made and synthetic

fabrics has increasingly displaced traditional handloom weaving, leading to reduced demand for handmade products (Sindhu & Rejitha, 2023). National observations further indicate that a majority of weavers have experienced declining incomes due to outdated infrastructure, weak market linkages, and inconsistent access to raw materials. These challenges have resulted in lower production levels and rising unemployment in major weaving clusters such as West Bengal and Uttar Pradesh. Although government schemes provide subsidies and training, gaps in implementation and limited outreach continue to prevent many weavers from receiving meaningful support, leaving the sector economically fragile

### ***1.6.3. Gendered Dimensions and Women's Empowerment***

Women form the invisible backbone of the handloom industry, contributing significantly through tasks such as thread preparation, weaving, dyeing, and post-loom finishing. Despite their substantial labour, they often remain economically disadvantaged and socially underrepresented. A 2024 analysis revealed that although many women have taken on leadership roles within cooperatives, they continue to face wage disparities, poor working conditions, and limited access to welfare schemes (IIP Series, 2024). Rural women shoulder dual responsibilities, balancing household duties with labour-

intensive weaving activities. Women-headed families, in particular, operate under considerable pressure and financial insecurity, especially within traditional joint family structures. Deep-rooted gender norms further restrict their mobility, decision-making authority, and participation in training programmes or market networks. For sustainable growth in the handloom sector, policies must prioritise women's empowerment through education, access to finance, leadership development, and digital inclusion.

#### ***1.6.4. Toward Sustainable Interventions: Policy, Technology, and Cooperation***

Long-term sustainability in handloom weaving requires multi-level strategies that protect tradition while ensuring economic strength. One model of success is the revival of Kala cotton in Kutch, Gujarat, which has reintroduced eco-friendly fibers into supply chains while increasing rural income (Vogue Business, 2025). Institutions such as the Indian Institutes of Handloom Technology have supported innovation in natural dyes, design education, and technical training, though their reach is limited by geographic and digital barriers (IIHT, 2024). Cooperatives like APCO in Andhra Pradesh have helped improve branding, distribution, and policy advocacy for local weavers (APCO, 2025). Emerging technologies, including AI-enabled design tools, are now helping to bridge the gap between traditional aesthetics and

contemporary market demands (Raviprakash et al., 2019). These examples demonstrate that handloom weaving can thrive through integrated interventions linking government policy, grassroots participation, digital tools, and sustainable material practices.

## **1.7 Challenges Faced by Handloom Weavers**

The Indian handloom sector plays a pivotal role in sustaining rural livelihoods, preserving traditional craftsmanship, and contributing to cultural heritage. Despite its importance, the sector is beset by a range of structural, economic, and social challenges that have led to a significant decline in weavers' well-being and sectoral productivity.

### ***1.7.1. Ageing Workforce and Generational Attrition***

A critical concern is the ageing demographic of handloom weavers. The average age of active weavers has increased significantly, with many artisans above the age of 50. Younger generations are reluctant to enter the field due to low earnings, lack of social security, and absence of career growth (Das & Moharana, 2020). This generational gap has created a vacuum in skill transmission and poses a long-term threat to the survival of the handloom tradition. In states like Tamil Nadu and Andhra Pradesh, studies show that only a fraction of the younger population considers handloom weaving as a viable occupation (Dev & Adhikari, 2021).

### ***1.7.2. Shortage of Skilled Labour and Informal Training Systems***

The handloom sector predominantly relies on informally acquired skills, often passed through generations without formal training. This has led to variations in quality and a lack of standardized practices. Cooperative societies, which are intended to foster collective production and marketing, suffer from inefficiencies due to the low skill level of members (Prasad & Narayana, 2019). The absence of structured skill development initiatives further constrains innovation and productivity.

### ***1.7.3. Deteriorating Health and Working Conditions***

Weavers often work in confined, poorly ventilated spaces for long hours, leading to musculoskeletal disorders, vision problems, and respiratory issues (Saxena, 2017). Most are not covered by health insurance or welfare schemes due to their informal employment status. Mental health issues, such as anxiety and depression, are also prevalent, exacerbated by financial insecurity and uncertain market demand. The lack of occupational safety measures continues to undermine productivity and worker morale.

### ***1.7.4. Inadequate Training and Limited Access to Skill Upgradation***

Training in modern weaving techniques, design innovation, and quality control is lacking, particularly in

rural areas. Many weavers remain unaware of government-run training schemes or lack the time and resources to attend them (Dev & Adhikari, 2021). This training gap prevents weavers from adapting to market trends, such as demand for eco-friendly textiles or fusion designs, thereby reducing their competitiveness.

#### ***1.7.5. Technological Backwardness and Digital Exclusion***

Technological stagnation remains a serious bottleneck in the growth of the handloom sector. Most weavers still use traditional pit looms or frame looms, which limit production speed and the complexity of designs. Furthermore, many are digitally excluded, lacking access to e-commerce platforms or social media marketing, which limits their reach to urban or global consumers (Rani & Meenakshi, 2020). Without technological upgradation, the sector cannot compete with power loom or synthetic textile manufacturers.

#### ***1.7.6. Wage Dissatisfaction and Economic Insecurity***

Wage dissatisfaction is a long-standing issue in the handloom industry. Even in cooperative societies, where some form of collectivism exists, wages are often delayed, inconsistent, or insufficient to meet basic living expenses. Although government schemes provide subsidies and raw material support, the actual earnings of weavers remain low due to middlemen exploitation, poor pricing policies,

and lack of direct market access (Sundaram & Bedi, 2018). This economic vulnerability pushes many weavers to abandon the profession in search of better-paying informal jobs.

### ***1.7.7. Lack of Market Access and Branding Support***

Weavers face serious barriers in accessing domestic and international markets. Due to limited exposure, many depend on local traders or middlemen who often pay unfair prices. Government exhibitions and handloom expos are occasional and urban-centric, failing to provide consistent demand. Furthermore, the absence of branding and intellectual property protection means that traditional designs are often copied by larger textile companies without compensation to original creators (Das & Moharana, 2020).

### ***1.7.8. Policy Gaps and Institutional Weakness***

Although various welfare schemes have been introduced, including the National Handloom Development Programme and Weavers' Mudra Scheme, implementation remains inconsistent. Many weavers are unaware of entitlements or face bureaucratic hurdles in accessing them. Institutional support from cooperatives, NGOs, and government agencies is often weak due to a lack of coordination, corruption, or political interference (Prasad & Narayana, 2019). As a result, benefits do not always reach the intended beneficiaries.

## **1.8. Marketing-Related Problems Faced by Handloom Weavers**

Marketing is a critical component of any industry, determining its reach, competitiveness, and sustainability. However, the handloom sector in India continues to grapple with numerous marketing-related challenges that hinder its growth, limit customer engagement, and weaken its position in the textile market. These challenges are both systemic and strategic in nature.

### ***1.8.1. Inadequate Customer Relationship Management (CRM)***

Effective Customer Relationship Management (CRM) is essential for sustaining customer loyalty, understanding buyer preferences, and generating repeat business. Unfortunately, most handloom cooperative societies lack formal CRM systems and dedicated personnel to manage customer engagement (Dev & Adhikari, 2021). This leads to weak customer follow-up, reduced brand recall, and limited awareness of buyer feedback. In many cases, societies rely solely on occasional exhibitions or government-organized expos, which fail to foster long-term buyer-seller relationships.

### ***1.8.2. Limited Understanding of Consumer Preferences***

Modern consumers demand continuous innovation in fabric design, colour palettes, and fashion trends. However, many weavers' cooperatives are unable to meet

these dynamic preferences due to a lack of market research and design intelligence. Most weavers continue to produce traditional patterns that, while culturally rich, may not resonate with younger or urban audiences (Sundaram & Bedi, 2018). The failure to adapt to changing consumer tastes restricts market reach and reduces the commercial viability of handloom products.

### ***1.8.3. Absence of Job Promotions and Career Mobility***

Marketing also suffers indirectly from the internal dynamics of the handloom sector. Most cooperative societies do not offer clear promotional hierarchies or career progression pathways. This absence of upward mobility reduces employee motivation and discourages new entrants from joining the industry (Das & Moharana, 2020). Without a dynamic and motivated workforce, the sector struggles to innovate and market its products effectively.

### ***1.8.4. Weak Promotion of Unique Selling Proposition (USP)***

The handloom sector possesses inherent strengths such as eco-friendliness, cultural richness, handcrafted uniqueness, and sustainable production processes. However, these Unique Selling Propositions (USP) are often not communicated effectively to the market (Rani & Meenakshi, 2020). Many cooperatives lack branding strategies or digital presence, which means their products

are perceived as traditional rather than premium or artisanal. The absence of targeted marketing reduces differentiation from mass-produced textiles and power loom products.

### ***1.8.5. Intense Competition from Mechanized and Illegal Textile Units***

One of the most significant threats to the handloom sector is the growing competition from mechanized power looms and mill-based textile units. These sectors offer cheaper production, faster output, and uniform quality, often undermining the value of handloom craftsmanship. Furthermore, illegal imitation of handloom designs by power loom operators dilutes market authenticity and pushes genuine weavers out of the competitive space (Prasad & Narayana, 2019). Many power loom products are falsely marketed as handloom, confusing consumers and reducing demand for authentic handmade textiles.

### ***1.8.6. Weak Implementation of Government Marketing Policies***

While the government has introduced schemes such as the Rebate Scheme, the National Handloom Development Programme (NHDP), and the India Handloom Brand (IHB) initiative, implementation gaps persist. Many cooperative societies face delays in availing rebates, lack awareness about branding schemes, or struggle with bureaucratic hurdles (Dev & Adhikari, 2021). The

absence of regular audits or review committees to monitor these programs further weakens their impact. As a result, even well-intentioned policies fail to translate into improved market access or financial gains for weavers.

### ***1.8.7. Digital Divide and Limited E-Commerce Access***

In the age of digital retail, most handloom cooperatives remain excluded from online marketplaces. This digital divide is due to factors such as lack of digital literacy, inadequate internet access, and absence of logistics support for packaging and delivery (Kumar, 2019). E-commerce platforms have the potential to connect weavers directly to national and global customers, bypassing middlemen and ensuring fair pricing. However, without government-backed training and infrastructure support, the majority of weavers remain invisible in the digital economy.

### **1.9. Physical Hazards Faced by Handloom Weavers**

Handloom weaving is a key livelihood in Tirunelveli district, deeply rooted in tradition. However, weavers often work in poor conditions that expose them to various physical hazards. Long hours of repetitive work, awkward postures, inadequate lighting, and poor ventilation lead to musculoskeletal pain, eye strain, and respiratory issues. With limited awareness and healthcare access, these risks remain largely unaddressed. Handloom weaving is a labour-intensive occupation that places considerable

physical strain on the human body, often leading to chronic health problems among weavers. Studies have consistently shown that weavers suffer from a range of musculoskeletal disorders due to repetitive motions, prolonged sitting, inadequate lighting, and poor ergonomic design of traditional looms (Bagale & Mahajan, 2022; Sivakkolundhu & Sheeba, 2021). The constant use of hands and legs in an awkward posture can result in joint pain, lower backache, neck stiffness, and in some cases, irreversible spinal damage.

According to Gundeti (2018), long working hours, lack of proper rest, and inadequate seating arrangements exacerbate physical fatigue and reduce overall productivity. In many home-based weaving setups, the absence of ventilation, sufficient lighting, and appropriate work surfaces contributes further to physical discomfort and eye strain (Sivasubramanian & Rajendran, 2020). Moreover, poor access to healthcare and lack of health insurance among the weaving community delay treatment and lead to worsening of conditions that could have been addressed with early intervention. Despite the high prevalence of such health issues, very few targeted initiatives have been implemented to address the ergonomic needs of handloom weavers. Sivakkolundhu and Sheeba (2021) advocate for the provision of government-subsidized ergonomic kits and mobile health clinics to improve the working conditions and physical well-being of weavers, particularly in remote and rural

clusters. Improving the physical health of weavers is not only vital for their quality of life but also essential for sustaining productivity and reducing occupational attrition in the handloom sector.

### ***1.9.1. Work-Related Musculoskeletal Disorders (WMSDs)***

Handloom weavers in Tirunelveli district face significant physical challenges, particularly work-related musculoskeletal disorders (WMSDs). These conditions arise from repetitive strain and poor ergonomic practices inherent in traditional weaving activities. A recent study conducted in the neighbouring Tenkasi district, an area with similar occupational and demographic characteristics, reported that 100 percent of weavers experienced pain in at least one part of the body, including the lower back, neck, shoulders, wrists, and knees (Bhuvanewari and Manimekalai, 2025). The nature of weaving involves continuous repetitive movements of the upper limbs and prolonged sitting in static postures, which contribute to both acute and chronic musculoskeletal strain. Repeated use of the right arm for shuttle operation and frequent forward bending further result in shoulder impingement and joint fatigue (Sampratyaya, 2025).

### ***1.9.2. Postural Strain and Static Load***

The weaving process involves extended hours of sitting, often on the floor without any lumbar support. This static position, combined with forward-leaning movements,

contributes significantly to spinal stress and fatigue. The lack of ergonomic seating results in unnatural curvature of the spine and reduced blood circulation, eventually leading to chronic back pain and fatigue (Gomathi & Pramanik, 2025). A study among older weavers indicated that more than 57% of those above 60 years of age exhibited high-risk postural injuries, indicating the long-term effects of static loading. Without proper postural interventions or awareness of ergonomics, weavers continue to endure cumulative physical damage.

### ***1.9.3. Visual Strain***

Weaving involves intricate pattern observation and fine motor coordination, which places significant strain on the visual system. Poor lighting in loom sheds, combined with long hours of detailed work, leads to common complaints such as eye irritation, blurred vision, and early onset of visual fatigue. In many handloom clusters of Tirunelveli and nearby districts, loom setups do not comply with adequate lighting standards, further exacerbating visual stress among aging weavers (Sangeetha & Revathi, 2024). Exposure to airborne dust and textile fibers adds to the risk of eye-related disorders such as conjunctivitis and early cataracts.

### ***1.9.4. Respiratory and Environmental Hazards***

Handloom weavers often work in enclosed, poorly ventilated spaces filled with cotton fibers and chemical residues from dyes. This exposure poses significant

respiratory hazards, especially when safety protocols like masks or exhaust fans are absent. Weavers inhale fiber dust continuously during the weaving and finishing stages, leading to chronic coughing, bronchial irritation, and respiratory discomfort (Rao & Siva, 2023). Additionally, many looms are operated in home-based units where children and elderly are also exposed, increasing the community-wide risk of respiratory conditions.

#### ***1.9.5. Noise-Induced Hearing Loss***

The repetitive clattering of shuttle looms produces continuous high-decibel noise. Prolonged exposure without hearing protection has been linked to gradual hearing loss among weavers. Studies indicate that handloom weavers often ignore the impact of noise pollution on their health due to lack of awareness and absence of preventive healthcare practices (Sangeetha & Revathi, 2024). Over time, the high-frequency noise damages the auditory system, particularly in older workers who have spent decades in the trade.

#### ***1.9.6. Cardiovascular and Systemic Effects***

Beyond localized pain and sensory strain, handloom weavers are also vulnerable to systemic health problems such as hypertension, fatigue, and digestive issues. Prolonged immobility during work hours leads to poor blood circulation and increased risk of cardiovascular complications (Tripathi, 2023). Chronic fatigue is another

prevalent concern, as the demanding physical nature of weaving leaves little room for rest or recovery. The physiological burden of uninterrupted labour often exceeding eight hours a day contributes to high rates of exhaustion, dizziness, and headaches (Bhuvanewari & Manimekalai, 2025).

### ***1.9.7. Lack of Ergonomic Awareness and Preventive Care***

Despite the hazardous nature of their occupation, most handloom weavers in Tirunelveli are not equipped with the knowledge or resources to manage their health effectively. Due to socio-economic constraints, they often delay seeking medical attention until the condition worsens. Furthermore, most are unaware of ergonomic practices such as workstation adjustments or taking regular rest breaks (Gomathi & Pramanik, 2025). The absence of health education, combined with low income and minimal institutional support, results in a cycle of neglect and worsening physical health conditions.

These challenges are often worsened by poor ergonomic conditions, lack of healthcare access, and limited awareness about occupational safety. Addressing these issues through targeted interventions, including ergonomic improvements, regular health screenings, and government-supported welfare schemes, is crucial. Ensuring a healthier working environment will not only

safeguard the well-being of weavers but also strengthen the sustainability and resilience of the handloom industry.

## **1.10. Mental Well-Being of Handloom Weavers**

### ***1.10.1. Occupational Stress and Psychological Pressure***

Handloom weaving is not only a physically repetitive occupation but also a mentally demanding one, marked by long working hours, low income, and high expectations, often without adequate recognition or institutional support. The work requires continuous concentration, precision, and sustained manual effort, typically carried out while seated in uncomfortable postures for extended periods. These physical demands frequently result in exhaustion that evolves into emotional and psychological fatigue. Many weavers operate in poorly lit and inadequately ventilated environments, intensifying discomfort and elevating stress levels. As a result, handloom weavers commonly experience psychological strain, including emotional exhaustion, diminished self-worth, and reduced motivation. This burden is particularly pronounced among women weavers, who juggle weaving with household responsibilities, thereby increasing their overall mental load.

Furthermore, the repetitive nature of weaving and the constant pressure to meet production targets amid unstable market conditions contribute significantly to mental distress. Weavers have limited control over their work processes and income, relying heavily on

middlemen and fluctuating market prices for survival. This restricted autonomy, combined with economic insecurity and minimal appreciation for their craft, fosters persistent feelings of helplessness, anxiety, and frustration. Over time, these emotional pressures, if left unaddressed, may lead to more serious mental health issues such as depression. With limited access to mental health resources or awareness of coping strategies, most weavers endure their difficulties silently, internalizing stress and bearing its cumulative effects. The weaving profession, particularly in rural regions, therefore presents a complex interplay of physical strain and psychological hardship, underscoring the need for targeted mental health interventions and comprehensive welfare schemes tailored to this vulnerable workforce.

### ***1.10.2. Financial Insecurity and Life Satisfaction***

Financial insecurity is a serious contributor to poor mental health among handloom weavers in Tirunelveli. Most weavers rely on inconsistent and inadequate income, often controlled by middlemen or subject to delayed government assistance. This lack of financial stability affects their ability to provide for essentials such as food, healthcare, and education, resulting in ongoing psychological stress. A study by Maruthakutti and Pelsit (2024) found that 63.7 percent of elderly weavers in southern Tamil Nadu reported low financial stability, and more than half expressed dissatisfaction with their overall

quality of life. These conditions were strongly linked to symptoms of depression and anxiety. Supporting these findings, Anjani and Raja (2025) observed that handloom weavers across Tamil Nadu who lacked cooperative membership or alternative income sources were significantly more likely to suffer from financial pressure and emotional distress. Similarly, Meher and Panda (2024) documented how informal weavers in Odisha, facing sudden income losses during the COVID 19 lockdown, experienced heightened financial hardship and mental strain. This economic vulnerability is especially severe among older weavers and women who often face social neglect in addition to income instability. Chronic financial stress diminishes self-confidence, increases feelings of hopelessness, and leads to emotional withdrawal. Without meaningful social protection, financial literacy, or access to stable markets, many weavers remain trapped in a cycle of poverty and psychological burden. Interventions that offer income security, cooperative support, and timely government aid are essential for improving both the financial and mental well-being of handloom weavers.

### ***1.10.3. Prevalence of Mental Health Disorders in the Region***

Mental health challenges including anxiety, depression, and social withdrawal are increasingly prevalent in rural Tamil Nadu, particularly among traditional occupation

groups like handloom weavers. The National Mental Health Survey (2015–2016) reported that 11.8 percent of adults in the state experience common mental disorders, with rural districts facing a significantly wider treatment gap due to stigma, inadequate mental health infrastructure, and poor awareness (Flisher et al., 2018). A study on stigma in rural India found that more than 60 percent of residents hold negative perceptions of mental illness, often preventing individuals from accessing care (Shidhaye and Patel, 2019). Among handloom weavers, symptoms such as sadness, fatigue, sleep disturbances, and loss of appetite are frequently overlooked or internalized, owing to the informal nature of their work and lack of screening mechanisms (Jeeva, 2022).

The SMART Mental Health Program, implemented in similar rural Indian communities, demonstrated that simple community-based digital interventions and awareness campaigns could effectively reduce anxiety and depression symptoms and improve early detection (Maulik et al., 2024). Collectively, these findings highlight that untreated mental health conditions among weavers contribute to reduced work efficiency, strained social relationships, and increased dependency on alcohol or tobacco as coping mechanisms. There is an urgent need for culturally relevant, accessible, and community-integrated mental health support tailored to the unique realities of the weaving population in Tirunelveli.

## **1.11. Workplace Wellness of Handloom Weavers**

The handloom weaving sector in Tirunelveli District continues to be a vital source of livelihood, particularly for rural households, but the occupational wellness of its workers remains an area of concern. Most weavers operate from home-based units, often in poorly ventilated and inadequately lit environments without ergonomic infrastructure. These working conditions lead to significant health challenges such as musculoskeletal disorders, eye strain, fatigue, and respiratory discomfort (Kumar & Karmakar, 2018; Stalin et al., 2024). Weavers commonly suffer from chronic pain in the neck, back, shoulders, and lower limbs due to prolonged sitting and repetitive movements. A study conducted among weavers in Kanchipuram District highlighted the effectiveness of structured physiotherapy programs in reducing such ailments, suggesting the relevance of similar interventions in Tirunelveli (Stalin et al., 2024).

In addition to physical ailments, handloom weavers in Tirunelveli face psychosocial stress caused by inconsistent income, increasing raw material costs, and lack of formal labour protections (Parida, 2019; Siddiqui et al., 2021). Despite the presence of cooperative societies and welfare boards, awareness and access to health insurance, financial aid, and skill development initiatives remain limited (Ministry of Textiles, 2020). Improving workplace wellness for Tirunelveli's weavers demands a

multifaceted strategy ergonomic workspace redesign, localized health awareness programs, physiotherapy support, and stronger integration with cooperative schemes. These steps are essential to ensure sustainable livelihoods and improve the quality of life for handloom artisans in the region (Anjani, 2025; Handloom Export Promotion Council, 2019).

### **1.12. Functional Foods and Nutrition Support for Handloom Weavers' Health**

The National Family Health Survey (NFHS, 2005) reports that undernutrition continues to be disproportionately prevalent among adults in rural areas, whereas urban populations exhibit a higher incidence of overnutrition. Optimal nutrition plays a pivotal role in cellular regeneration, metabolic efficiency, and the prevention of chronic degenerative conditions. Gerber et al. (2003) emphasized that nutritional status is a key determinant not only of individual adult health but also of national productivity. In this context, assessing the nutritional status of handloom weavers, an essential segment of the country's labour-intensive workforce, becomes imperative for identifying health-related vulnerabilities and designing effective dietary interventions.

Trivedi et al. (2006) conceptualize nutritional status as the physiological condition of an individual in relation to nutrient intake, assessed through

anthropometric, biochemical, clinical, and dietary parameters. Dietary interventions supported by nutrition education are widely recognized as cost-effective strategies for improving the health profiles of vulnerable working populations such as handloom weavers. Functional foods, defined as foods that deliver health benefits beyond basic nutritional value (Thomas and Earl, 2001; Melissa, 2006), are increasingly used for targeted physiological support. According to Robertroid and Marul (2007) and Fereidoon (2007), such foods are integrated into regular dietary practices and contribute positively to long-term health outcomes.

The development of health mixes for supplementation in this study incorporated locally available nutrient-dense foods such as amla, flax seeds, soya, carrots, cruciferous vegetables, garlic, fish, and whole grains. Bengal gram dhal, known for its low glycemic index, is particularly beneficial for diabetic individuals (David, 2014), whereas black gram is valued for its rich protein, fiber, and mineral content (Idrees et al., 2013; Girish et al., 2012). Carrots offer substantial antioxidant capacity and support immune function while contributing to chronic disease prevention (Luciano et al., 2009; Mathews Roth, 2000; Bast et al., 2000). Tomatoes are likewise beneficial, as their high phenolic and flavonoid content supports glycemic regulation and offers cardiovascular protection (Blum et al., 2006). Cauliflower leaves, an often discarded byproduct, are nutrient-dense

and possess notable anti-carcinogenic potential (Kowsalya and Sangeetha, 1999; Podsedek, 2007). Amla demonstrates significant anti diabetic effects, and flaxseed contributes to improved protein intake and glucose metabolism (Daun et al., 2003; Pan et al., 2009). Soybeans, as highlighted by the American Heart Association, have been shown to reduce LDL cholesterol levels (Sacks, 2006). In addition, herbs and spices function as potent antioxidant and antimicrobial agents that further enhance nutritional quality (Sharon, 2007).

A dietary pattern rich in natural foods, particularly fruits, vegetables, legumes, and lean proteins, has been consistently associated with a reduced risk of non-communicable diseases (Rao, 2010; Ullah and Khan, 2008). Consequently, food-based approaches to chronic disease prevention are now widely recognized as critical determinants of population health, supported by a robust and expanding body of scientific evidence demonstrating their lifelong benefits.

### **1.13.Socio-Economic Condition of Handloom Weavers**

Handloom weavers in India continue to endure profound socio-economic distress, with their livelihoods marked by unstable employment, irregular income, and chronic poverty that limits their ability to meet even basic daily needs (Das, 2021). Despite the cultural and historical significance of the handloom sector, weavers remain trapped in a cycle of deprivation due to low wages, limited

market demand, and inadequate access to essential raw materials. Many weaving clusters operate in congested and poorly maintained environments, characterized by insufficient lighting, low ventilation, and outdated equipment, all of which contribute to both reduced productivity and diminished quality of life. The COVID-19 pandemic further exacerbated these vulnerabilities, causing supply chain disruptions, declining sales, and prolonged periods of unemployment. Compounding these challenges is the limited reach of government welfare schemes only a small fraction of weavers is able to access subsidies, financial assistance, or skill development programmes intended to support the sector (Khatoon and Iffat, 2021). As a result, a significant portion of the weaving community continues to struggle without institutional support, highlighting the urgent need for inclusive policies and targeted interventions aimed at safeguarding their livelihoods and preserving traditional craft practices.

#### **1.14. Developmental Policies and Market Challenges in the Handloom Industry**

The Department of Handlooms and Textiles in Tamil Nadu oversees the overall development of the handloom sector; however, weavers in Tirunelveli continue to face persistent challenges such as outdated technology, weak marketing systems, and exploitation by intermediaries (Raja, 2007; Rayapati et al., 2013). Although schemes like

the Integrated Handloom Development Scheme (IHDS) and the National Handloom Development Corporation (NHDC) provide support through training, raw material supply, and branding initiatives, their outreach and implementation remain limited. Workplace wellness also receives inadequate attention, as many weavers suffer from musculoskeletal disorders, eye strain, and psychological stress resulting from poor ergonomic conditions, long working hours, and irregular income (Kumar and Karmakar, 2018; Stalin et al., 2024). Women weavers, in particular, face the compounded burden of balancing domestic responsibilities with weaving activities, intensifying their socio-economic hardships (Vidhyanathan, 2013). To harness Tirunelveli's potential, strategic interventions are required to strengthen modern infrastructure, digital platforms, and direct market models, while prioritizing health, financial security, and social protection to ensure sustainable livelihoods.

### **1.15. The Cultural and Economic Significance of Chedi Butta Sarees**

The Chedi Butta saree, rooted in the fertile cultural soil of Tirunelveli district in Tamil Nadu, particularly in the villages of Veeravanallur, Velanguli, Puthukudiruppu, and Mormadam, is a testament to India's rich handloom heritage. Known for its distinctive floral motifs, "Chedi Butta" meaning "plant motif" in Tamil, this traditional saree is much more than a garment. It represents

centuries-old craftsmanship, intergenerational artisan skill, and a living narrative of rural cultural identity.

### ***1.15.1. Cultural and Artistic Value***

The artistry embedded in each Chedi Butta saree reflects a unique blend of heritage and aesthetic symbolism. The signature motifs, meticulously woven using the extra weft technique, typically include flowers, leaves, vines, and creepers. These elements are not only decorative but symbolically tied to fertility, nature, and traditional Tamil values. This style of weaving has been preserved and refined by the Sowrashtta community, a group of skilled weavers originally from Gujarat who settled in Tamil Nadu generations ago. Over time, these weavers localized their techniques and patterns to reflect the flora, festivals, and cultural sentiments of southern Tamil Nadu. The pallu (end piece) and border designs of the saree display elaborate, colourful plant motifs that stand out against soft cotton or blended fabrics. The motifs serve as a canvas for rural artistic expression and a reflection of the region's ecological environment. Beyond their visual appeal, these sarees are closely associated with temple festivals, cultural rituals, and daily traditional attire, making them integral to the cultural fabric of the region.

### ***1.15.2. Craftsmanship and Sustainability***

The uniqueness of the Chedi Butta saree lies in its intricate handloom weaving technique, which demands exceptional dedication, precision, and a deep

understanding of traditional weaving practices. Completing a single saree often requires several days of focused labour, depending on the intricacy of the design. Woven from cotton or cotton silk, these sarees are well-suited to the region's climate and serve as an eco-friendly alternative to machine-made textiles. Their production aligns with principles of sustainable fashion, as they reduce environmental impact compared to mass-produced synthetic garments. Beyond their aesthetic value, Chedi Butta sarees play a crucial role in preserving ancestral craftsmanship, with younger weavers acquiring skills through observation and hands-on learning within family networks. At a time when many traditional art forms are threatened by industrialization and globalized fashion trends, the Chedi Butta saree remains a resilient symbol of cultural heritage, skilled artistry, and enduring community identity.

### ***1.15.3. Economic Importance and GI Recognition***

Economically, the Chedi Butta saree provides a lifeline to hundreds of weaver families in the region. In a rural economy where employment opportunities are often limited, handloom weaving offers home-based, skill-intensive work that supports both men and women. The recognition of the saree with a Geographical Indication (GI) tag in 2023 has further enhanced its market visibility and protected it from imitation. The GI tag serves not only as a mark of authenticity and quality but also as a legal

safeguard for artisans. It empowers weaver cooperatives and small producers to brand their work more effectively and reach wider markets, both national and international. With rising demand in urban craft exhibitions and through online handloom platforms, the economic prospects of the Chedi Butta saree have expanded beyond regional boundaries. Moreover, government and cooperative interventions, such as those by Co-optex and local handloom clusters, have begun supporting marketing, training, and technological upgrades. This ensures that traditional practices are maintained while also adapting to modern market dynamics.

#### ***1.15.4. Preservation of Identity and Legacy***

The continued production of Chedi Butta sarees represents more than a livelihood; it embodies the preservation of cultural identity and artistic heritage. For the weavers of Veeravanallur and surrounding villages such as Velanguli, Puthukudiruppu, and Mormadam, the saree is a proud expression of their community's legacy, creativity, and resilience. Recognized with a GI tag, the Chedi Butta saree symbolizes the richness of traditional handloom practices and reinforces the importance of supporting indigenous crafts. It reminds consumers to appreciate the human effort woven into every thread and illustrates how traditional textiles can harmoniously blend artistry, ecology, economy, and identity. With continued policy support and conscious consumer engagement, such

heritage crafts can not only survive but flourish in an ever-evolving world.

## **1.16.Survival Strategies of Handloom Weavers**

Despite persistent hardships, handloom weavers in regions such as Tirunelveli District have shown remarkable resilience by adopting diverse and innovative strategies to sustain their traditional occupation. These strategies reflect both individual and collective efforts to overcome systemic barriers and adapt to a rapidly changing economic landscape.

### ***1.16.1. Diversification of Livelihood Sources***

The income generated from handloom weaving is often uncertain and insufficient, pushing many weavers to seek alternative ways to sustain their families. This has led to a growing trend of engaging in various types of work in addition to weaving. To ensure their economic survival, weavers in districts like Tirunelveli have adopted multiple strategies to support themselves throughout the year. A common approach is combining handloom weaving with agricultural activities. During farming seasons, particularly when weaving work slows down, many artisans work in the fields as labourers or manage small plots of land. This seasonal shift allows families to maintain a steady flow of income and make use of available labour during periods of low demand for handloom products.

In addition to farming, weavers also take up work such as construction labour, roadside vending, tailoring, and other small-scale trades. These supplementary jobs offer daily wages that help meet essential household expenses. In some cases, families raise livestock or poultry, using animal husbandry as a small but valuable source of regular income. Another significant trend is the migration of younger family members to towns and cities in search of better-paying jobs. These individuals often find employment in factories, shops, or domestic services and send money back home to support their families. These remittances have become an important part of rural household income, especially when traditional weaving does not meet basic financial needs.

Women in handloom households also contribute through home-based work such as preparing snacks, embroidery, and tailoring. These activities allow them to balance domestic responsibilities while participating in income generation. Though the earnings may be modest, they play a crucial role in managing day-to-day expenses. This move towards multiple income sources highlights the economic pressures facing handloom households. It reflects their efforts to survive in an environment where traditional weaving alone does not guarantee financial security. As noted in a study by Chandrasekar and Natarajan (2022), nearly 47 percent of weaver families in southern Tamil Nadu rely on more than one occupation to stabilize their income and deal with economic challenges.

While such diversification helps weavers cope with immediate hardships, it also underscores the need for deeper policy interventions to improve the income potential of handloom weaving. Without such support, these families will continue to depend on outside jobs, leading to a gradual decline in the traditional craft.

### ***1.16.2 Formation of Self-Help Groups and Cooperatives***

Self-help groups (SHGs) and cooperative societies have emerged as a critical mechanism for financial stability and collective empowerment. These community-based organizations provide access to affordable credit, bulk procurement of raw materials, and organized marketing channels, thereby reducing dependence on exploitative intermediaries (Devi & Rajalakshmi, 2021). SHGs, usually composed of 10 to 20 members, predominantly women, operate on the principle of thrift and credit, enabling members to access low-interest loans for purchasing yarn, repairing looms, or meeting urgent household expenses. Over time, many SHGs evolve into structured microenterprises that coordinate group-level production and sales, ensuring greater bargaining power and financial security (Anand & Kumar, 2019).

Cooperative societies operate on a larger and more formal scale, governed by cooperative laws and supported by state departments or apex handloom organizations. They play a crucial role in supplying raw materials at subsidized rates, maintaining quality control, and

facilitating centralized marketing through emporiums, exhibitions, and trade fairs (Kavitha and Subramanian, 2022). Importantly, cooperatives serve as a vital link between government schemes and their implementation at the grassroots level, enabling weavers to access health insurance, pension plans, wage support, and even Geographical Indication (GI) registrations that safeguard and promote the market identity of region-specific handloom products (Patil and Sundararajan, 2020). These institutional structures thus provide not only financial stability but also social protection and formal recognition to marginalized artisans. A significant contribution of both SHGs and cooperatives lies in their impact on women's empowerment. By offering opportunities for participation in financial decision making, marketing, and leadership, they help women weavers move beyond their traditional auxiliary roles in family weaving units (Mohan and Ramesh, 2021).

Training programmes in bookkeeping, quality management, and digital payments conducted through SHGs enhance managerial skills and build confidence among women. In Tamil Nadu, several rural clusters have reported improved income stability and increased community resilience through such collective frameworks. However, challenges such as irregular participation, weak leadership structures, bureaucratic delays, and digital illiteracy continue to hinder their full effectiveness (Kavitha and Subramanian, 2022). Despite

these constraints, SHGs and cooperatives remain indispensable mechanisms for transforming handloom weaving from a vulnerable livelihood into a sustainable and respected profession.

### ***1.16.3. Adoption of Digital Marketing and E-Commerce***

The integration of digital technologies into the handloom sector has created significant opportunities for weavers to expand their reach and improve profitability. Digital marketing and e-commerce platforms are transforming the traditional business models of handloom weavers, particularly benefiting younger generations who are more adept at using smartphones and social media tools. These platforms enable direct interaction with consumers, allowing artisans to bypass intermediaries who often reduce profit margins and control market access (Sharma & Dhanalakshmi, 2022).

Weavers are increasingly turning to specialized online marketplaces such as Amazon Karigar, Flipkart Samarth, and GoCoop, which promote handmade and artisan-crafted goods. These platforms provide visibility to weavers at both national and international levels, allowing them to showcase their products to a wider audience. Additionally, the use of social media tools like Instagram, Facebook, and WhatsApp Business has allowed weavers to build customer relationships, share production stories, and receive direct feedback from

buyers. This shift to digital storytelling is particularly effective in appealing to urban consumers who value transparency, authenticity, and handmade craftsmanship (Ghosh, 2021).

The elimination of middlemen and direct access to customers have contributed to better pricing, increased profit margins, and improved bargaining power for weavers. Moreover, the adoption of mobile payment solutions such as UPI, Google Pay, and Paytm has further enhanced the ease of doing business for rural artisans. Some handloom entrepreneurs now maintain digital catalogues, accept online orders, and use courier services to fulfil nationwide deliveries once unimaginable for rural weavers (Ministry of Textiles, 2023). The COVID-19 pandemic served as a major turning point. With physical markets and exhibitions halted during lockdowns, many artisans were compelled to explore online alternatives. As observed by Iyer and Ramanathan (2023), e-commerce adoption among handloom weavers surged by approximately 25 percent during the pandemic, and this trend has largely sustained due to continued demand for handmade goods and growing digital skills among artisans.

Government initiatives under the Digital India program, coupled with schemes such as One District One Product (ODOP), have further encouraged digital transformation in rural industries. Several non-governmental organizations and skill development

centres are actively conducting digital literacy workshops to train artisans in the use of smartphones, product photography, inventory tracking, and customer service management online (Srinivasan & Rao, 2022).

Despite the positive outcomes, challenges persist. Older weavers often face difficulties in adapting to digital platforms due to low literacy levels or lack of technological familiarity. Furthermore, inconsistent internet connectivity in remote villages, limited access to logistics, and rising competition on e-commerce platforms can restrict the full potential of online marketing for handloom products. Nonetheless, the shift toward digital platforms marks a significant evolution in the survival strategies of the handloom sector. When supported with appropriate training, financial assistance, and infrastructure, digitalization can offer long-term resilience and sustainable growth for India's rural weaving communities.

#### ***1.16.4. Product and Design Innovation***

To adapt to evolving consumer preferences and withstand competition from mechanized textile industries, handloom weavers are increasingly embracing product and design innovation. The demand for traditional handloom products has declined in many urban markets due to shifting fashion trends, fast-fashion alternatives, and mass production. In response, many artisans are moving beyond conventional designs by incorporating

contemporary aesthetics and functional products to cater to new market segments.

A growing number of weavers are experimenting with vibrant colour palettes, minimalist designs, and fusion motifs that blend traditional cultural elements with modern styles. These design modifications are not only visually appealing but also make handloom products relevant for younger, style-conscious consumers. In addition to garments, many weavers have diversified their product range to include home décor items such as table runners, cushion covers, curtains, stoles, tote bags, and wall hangings. These products serve both decorative and practical purposes, increasing the versatility and marketability of handloom textiles. One of the most notable developments is the growing adoption of eco-friendly and sustainable practices. In response to rising global awareness about environmental responsibility, many handloom clusters are transitioning to the use of natural dyes, organic cotton, plant-based fibers, and chemical-free processing methods. This approach not only aligns with sustainable development goals but also allows artisans to tap into premium eco-conscious markets, both domestically and internationally. Certifications for organic and sustainable products have added value to handloom goods and helped attract ethically minded customers (Patel & Mehra, 2023).

Design innovation has also been fuelled by collaborations with professional designers, textile

researchers, fashion schools, and NGOs. These partnerships allow weavers to gain insights into emerging trends, colour theory, material handling, and value addition. Many design institutions such as the National Institute of Design (NID) and National Institute of Fashion Technology (NIFT) have partnered with handloom cooperatives to introduce innovations in product aesthetics, utility, and durability. Through co-creation and joint product development, artisans are exposed to newer markets and high-end customer demands (Reddy & Sharma, 2021).

Further, the use of branding and storytelling plays a vital role in the success of product innovation. Artisans who incorporate their cultural narratives, geographical identity, and craftsmanship legacy into branding strategies are often able to generate emotional appeal and consumer loyalty. Story labels, product tags, and digital storytelling through websites and social media have all contributed to enhancing the uniqueness and desirability of handloom goods. Rao and Kumari (2024) emphasize that when product innovation is supported by effective branding, visibility and income levels of handloom clusters can increase by as much as 30 percent. Their findings underline the importance of merging creativity with business acumen, especially in a sector that historically depended on limited product lines and conventional sales channels.

However, challenges persist in scaling product innovation. Many weavers lack formal training in design or market research and face difficulty sourcing eco-friendly raw materials at affordable prices. There is also resistance among some older weavers who prefer sticking to traditional patterns handed down through generations. Addressing these issues through design education, financial support, and market exposure is essential to ensure that innovation becomes a sustainable and inclusive practice in the handloom sector.

#### ***1.16.5. Support from NGOs and Institutional Partnerships***

Non-governmental organizations (NGOs), academic institutions, and government-supported design agencies play a pivotal role in strengthening the handloom sector through structured interventions that go beyond financial aid. These partnerships are instrumental in modernizing traditional weaving practices, enhancing skill sets, and bridging the gap between rural artisans and dynamic market demands.

Organizations such as Dastkar, SEWA (Self Employed Women's Association), and institutions like the National Institute of Fashion Technology (NIFT) and the National Institute of Design (NID) offer targeted training programs focused on quality control, design innovation, product finishing, pricing strategies, and market positioning. These training initiatives expose weavers to

contemporary design aesthetics, colour theory, textile fusion techniques, and functional product adaptation. Through practical workshops and mentorship models, artisans gain the technical competence required to improve the visual appeal, durability, and utility of their products (Verma & Rathi, 2022).

Moreover, institutional collaborations assist weavers in participating in regional exhibitions, buyer-seller meets, and national and international trade fairs. These platforms provide crucial visibility, helping artisans network with retailers, exporters, and fashion designers. Events organized by organizations like Dastkari Haat Samiti, India Handloom Brand, and Crafts Council of India are known to draw attention from corporate buyers and connoisseurs, enabling artisans to showcase their craftsmanship to a broader clientele. Participation in these venues has often resulted in large-volume orders and long-term partnerships with retail brands (Ravikumar & Meenakshi, 2024).

Technical support from institutions has led to measurable improvements in weaving efficiency. NGOs have introduced upgraded pit looms, frame looms, and jacquard attachments to reduce manual effort and increase output without compromising on traditional techniques. These interventions have also streamlined raw material procurement, allowing weavers to access high-quality yarns, eco-friendly dyes, and standardized tools at

reduced costs through cooperative sourcing or government tie-ups (Mukherjee & Sinha, 2021).

Another major contribution of NGOs is in the area of legal and intellectual property rights, particularly in facilitating Geographical Indication (GI) registration. GI tags help in branding products by linking them to a specific geographical region known for its unique quality or traditional production method. NGOs assist in documentation, legal filings, and awareness campaigns around GI-marked products. This has been vital in protecting the identity of regional handloom varieties such as Kancheepuram silk, Pochampally ikat, and Chennimalai cotton, and in securing better prices for the weavers (Patel & Mehra, 2023).

Ravikumar and Meenakshi (2024) emphasize that such partnerships significantly improve knowledge transfer, foster entrepreneurial mindsets, and enable artisans to function not just as producers but as cultural entrepreneurs. These institutional collaborations also help in transitioning from a subsidy-dependent model to a self-sustaining ecosystem, where weavers are better equipped to navigate market competition. Despite the progress, there remain barriers such as low participation among the most marginalized groups, language and literacy limitations, and the digital divide in rural areas. Sustained engagement, inclusive training methods, and field-level follow-up are essential to ensure that these interventions reach the most vulnerable weaving communities.

### ***1.16.6. Emphasis on Education and Youth Involvement***

In many handloom-weaving families, a long-term survival strategy has involved a conscious investment in the education of children, aimed at providing them with more secure and diverse livelihood opportunities. Historically, weaving was passed down through generations by apprenticeship within the family. However, due to the economic instability associated with handloom weaving in recent decades, many parents have begun encouraging their children to pursue formal education with the hope of employment in the public or private sector. This shift reflects a growing recognition that education offers social and economic mobility (Rani & Thomas, 2021).

Interestingly, while a significant number of educated youth migrate away from weaving and settle into urban professions, there is a growing segment of second-generation weavers who are choosing to return to their roots not to continue traditional methods passively, but to revitalize and modernize them. These youth bring with them knowledge in business management, digital marketing, branding, product diversification, and e-commerce tools. Many have introduced inventory software, cost accounting methods, and customer relationship management systems into their family-run weaving units (Kumar & Selvi, 2022).

Their return marks a critical transition in the identity of the handloom sector from a subsistence-based craft to an emerging form of creative entrepreneurship. These young changemakers use platforms such as Instagram, Etsy, Amazon Karigar, and Shopify to promote handloom products to a global audience. They actively engage in storytelling, build digital catalogues, manage logistics, and handle customer feedback, often converting their family's informal setup into a professionally managed business (Anwar & Bose, 2023). Another notable trend among such youth-led enterprises is the focus on design innovation and collaboration. Educated weavers often partner with fashion designers, textile researchers, and artisans from other regions to blend traditional motifs with modern aesthetics. They explore sustainable fabric options, experiment with hybrid weaving techniques, and curate limited-edition collections that appeal to niche markets. This evolution is helping redefine handloom as a high-value craft rather than a low-cost traditional industry (Banerjee & Narayanan, 2022).

The involvement of youth also has social implications. In regions like Tirunelveli and Chennimalai, young returnees are increasingly involved in forming digital cooperatives and skill-sharing communities where they train others in technology, photography, online sales, and financial literacy. Their leadership is instrumental in breaking the isolation of rural artisans and connecting

them with national and international networks. Kumar and Selvi (2022) emphasize that the impact of educated youth in the handloom sector is significant when reinforced by family legacy, cooperative support, and institutional backing. Their study found that enterprises led by second-generation weavers demonstrated greater adaptability, income diversification, and market penetration compared to traditional weaver groups. Moreover, these enterprises were more likely to reinvest in the community, creating employment opportunities for other local artisans.

However, some barriers prevent wider youth involvement in the sector. Many still perceive weaving as labour-intensive and unprofitable, especially in the absence of consistent support, infrastructure, and recognition. Thus, supportive policy frameworks, targeted incubation programs, and access to startup capital are necessary to retain young talent in the handloom ecosystem.

### **1.17. Government Schemes Related to Handloom Weaving in India**

India's handloom weaving sector, rich in heritage and craft, is supported by various government initiatives that aim to ensure the sustainability of this traditional industry. These schemes are implemented primarily by the Ministry of Textiles through the Office of the Development Commissioner (Handlooms). Each scheme addresses

specific needs such as credit access, marketing, infrastructure, welfare, and modernization.

### ***1.17.1. National Handloom Development Programme (NHDP)***

The National Handloom Development Programme (NHDP) is a cornerstone initiative aimed at enhancing the overall development of the handloom sector through integrated and sustainable interventions. This scheme promotes cluster-based development, especially at the block level, where groups of weavers receive collective benefits such as improved looms, upgraded work sheds, and shared infrastructure like dyeing units and design centres. It also focuses on raw material support, enabling weavers to procure yarn, dyes, and chemicals at subsidized rates. One of the most notable features of NHDP is its push toward marketing assistance, where weavers are supported to participate in national and international exhibitions, craft fairs, and buyer-seller meets. This exposure helps them understand market trends, pricing strategies, and consumer preferences. Recently, NHDP has emphasized digital marketing through tie-ups with platforms such as Amazon Karigar and GeM, which have broadened the market reach of rural artisans. The programme is not only reviving traditional designs but also promoting contemporary product development by encouraging innovation and product diversification.

### ***1.17.2. Handloom Weavers' Comprehensive Welfare Scheme (HWCWS)***

The Handloom Weavers' Comprehensive Welfare Scheme (HWCWS) is designed to protect weavers and their families by providing essential social security benefits. Recognizing the precarious nature of employment in the unorganized sector, the scheme offers health insurance coverage through Ayushman Bharat (PMJAY), ensuring access to affordable and quality healthcare for both preventive and emergency treatments. Furthermore, the integration of the Pradhan Mantri Shram Yogi Maandhan (PM-SYM) has allowed weavers to receive a monthly pension after the age of 60, thus safeguarding their post-retirement years. Special provisions like the Mahila Coir Yojana encourage the participation of women by offering them financial assistance for coir-based activities, promoting gender equity in the sector. The scheme also provides accidental death and disability coverage, further protecting the economic well-being of the artisan families. This holistic welfare approach aims to bring dignity and stability to the lives of weavers, especially those in rural and marginalized communities.

### ***1.17.3. Yarn Supply Scheme (YSS)***

The Yarn Supply Scheme (YSS) ensures the steady and affordable availability of raw materials, particularly yarn, which is a critical input for handloom production. Administered by the National Handloom Development

Corporation (NHDC), the scheme provides yarn at the Mill Gate Price, along with a 10% subsidy and transportation reimbursement. This is particularly beneficial for weavers in remote villages who previously had to rely on private suppliers who charged exorbitant prices or provided low-quality material. The scheme includes multiple yarn types: cotton, silk, wool, jute, and blends, offering artisans a variety of raw material options for different fabric needs. The timely delivery of quality yarn enhances production cycles, maintains the consistency of finished products, and supports bulk orders and exports. It also enables weavers to experiment with various designs and textures, thereby enhancing the aesthetic and commercial value of handloom items.

#### ***1.17.4 Weavers' MUDRA Scheme***

The Weavers' MUDRA Scheme is a financial inclusion initiative that offers collateral-free loans to individual weavers, weaver groups, and self-help groups (SHGs). Under the scheme, artisans can access up to ₹10 lakhs in credit to purchase new looms, upgrade workspaces, expand operations, or develop new product lines. A key highlight of the scheme is the interest subvention of 6% for a period of three years, provided the loan repayment is made on time. This significantly reduces the financial burden on the borrower and encourages responsible borrowing. Previously, many weavers were forced to depend on local moneylenders who demanded high-

interest rates, often trapping them in cycles of debt. With MUDRA, weavers can become economically empowered, scale their operations, and take risks to diversify their offerings. The scheme also promotes entrepreneurship by linking weavers with banks and credit institutions for long-term financial sustainability

### ***1.17.5. Handloom Mark Scheme***

The Handloom Mark Scheme was introduced to combat the widespread problem of imitation products and to distinguish authentic handloom goods from machine-made replicas. This mark is a government-certified assurance of handwoven authenticity, managed by the Textile Committee under the Ministry of Textiles. Products bearing the Handloom Mark gain enhanced consumer trust and greater market credibility, both in India and abroad. The certification serves as a brand identity for weavers and cooperatives, helping them stand out in a competitive market flooded with power loom and imported textiles. It also assists retailers, exporters, and NGOs in identifying and promoting genuine handloom goods. By improving brand recognition, the scheme empowers traditional artisans and promotes ethical consumerism, especially among buyers who are increasingly conscious of sustainability and craftsmanship.

### ***1.17.6.India Handloom Brand (IHB)***

The India Handloom Brand (IHB) is an initiative to position handloom products in the premium and niche markets, both domestically and internationally. Only those products that meet stringent criteria of quality, design, eco-friendliness, and social compliance are certified under the IHB. This assures consumers of superior craftsmanship and encourages weavers to maintain high standards. IHB products are showcased at high-profile events such as fashion weeks, trade expos, and diplomatic gifting programs, thus offering artisans the opportunity to collaborate with well-known designers and retail chains. The scheme also fosters product innovation by encouraging the fusion of traditional weaving techniques with contemporary styles. IHB has played a key role in rebranding Indian handlooms as luxury and heritage products, attracting a new generation of socially conscious consumers and expanding the global footprint of Indian textiles.

### **1.18. Converged Skill Development Programme**

The Converged Skill Development Programme is aimed at equipping weavers with modern technical and entrepreneurial skills. Training modules include traditional and advanced weaving techniques, dyeing practices, use of jacquard and dobby looms, natural dye processing, and basic business management. The programme also integrates Computer-Aided Design

(CAD) training to promote digital literacy among artisans and to facilitate better design development aligned with current market trends. Trainees are offered stipends, toolkits, and course completion certificates to improve their employability. This initiative addresses generational knowledge gaps and encourages younger family members to pursue weaving as a profession. Additionally, by creating a trained workforce, the programme strengthens the cluster-based model and supports export readiness through quality and compliance awareness.

### ***1.18.1.e-Dhaga Mobile App and ERP Platform***

The e-Dhaga mobile application is a technology-driven platform developed to bring transparency and efficiency to the raw material supply chain. It allows registered weavers and cooperatives to place yarn orders online, check stock availability, track deliveries, and view subsidy credits in real-time. The app is integrated with the ERP system of the National Handloom Development Corporation (NHDC), enabling seamless coordination and digital record-keeping. This significantly reduces the dependency on middlemen, who often exploit weavers by inflating prices or delaying supplies. The platform also serves as a digital dashboard for government officials to monitor yarn distribution and scheme implementation. With increasing smartphone penetration in rural areas, e-Dhaga has become an essential tool for digitizing the traditional handloom sector.

### ***1.18.2. Pehchaan Identity Cards***

The Pehchaan ID card is a biometric-enabled identity card issued to handloom weavers after field verification. It serves as proof of occupation and helps streamline access to various government schemes, including credit, subsidies, health insurance, and pensions. The card also aids in building a centralized national database of weavers, which can be used for planning, resource allocation, and monitoring. Having a formal identity empowers weavers socially and economically, giving them legitimacy in the eyes of financial institutions, buyers, and policymakers. It also helps eliminate duplication of beneficiaries and ensures that resources are allocated to genuine artisans. The Pehchaan ID represents not just documentation, but a move toward recognition, respect, and policy inclusion for India's handloom weavers.

### ***1.18.3. Cluster Development Programme (CDP)***

The Cluster Development Programme (CDP) is designed to strengthen the productivity and competitiveness of handloom weavers by promoting shared infrastructure and community-based development. Clusters are selected based on the concentration of weavers and product potential, and comprehensive support is provided in the form of Common Facility Centres (CFCs), design banks, raw material depots, dyeing units, and training centres. These clusters help reduce production costs through

economies of scale and foster a sense of collective ownership and cooperation. The CDP also encourages local entrepreneurship by nurturing micro-enterprises within the cluster. In addition to physical infrastructure, the programme provides soft support such as exposure visits, design workshops, brand creation, and digital marketing. The holistic approach of the CDP makes it a key strategy for reviving stagnant handloom economies and ensuring long-term sustainability.

#### ***1.18.4. Cheddi Bhutta in the Handloom Weaving Tradition***

Cheddi Bhutta holds immense cultural, artistic, and economic significance within the traditional handloom sector, especially in southern Tamil Nadu, where weaving is intricately embedded in the socio-cultural and occupational life of rural communities. The term "Cheddi" denotes a flower or shrub, while "Bhutta" (also spelled *butta*) refers to motifs or ornamental patterns, often floral, leafy, or geometric in design. Crafted through the extra-weft weaving technique, these motifs create a three-dimensional effect on fabric, giving both visual richness and tactile elegance. As a result, Cheddi Bhutta has long been a preferred design for ceremonial attire, bridal sarees, and festive garments, symbolizing heritage and artistic finesse (Chattopadhyay, 2014).

These intricate motifs function as cultural markers, reflecting the weaver's identity, creativity, and

regional narrative. In many cases, Cheddi Bhutta designs draw inspiration from local biodiversity, spiritual themes, and mythological stories, transforming fabric into a canvas of cultural storytelling. Each motif is not just decorative, but a form of visual communication, encapsulating centuries of aesthetic tradition and the weaver's intuitive mastery. Over generations, families have developed signature motifs unique to their region or community, reinforcing the intergenerational transmission of both skill and cultural values (Gupta, 2015).

Traditionally, Cheddi Bhutta is woven with cotton or silk yarns, and its creation requires exceptional precision in colour blending, alignment, and pattern symmetry. The colour palette is influenced by cultural symbolism, with rich reds and golds representing auspiciousness, and cooler tones used for religious or everyday wear. In response to market changes, many artisans have embraced natural dyes, blended fibers, and eco-friendly materials, ensuring that this timeless motif remains relevant in a contemporary context while staying rooted in tradition (Handloom Export Promotion Council [HEPC], 2022).

From an economic perspective, Cheddi Bhutta plays a vital role in sustaining the livelihoods of rural weavers, especially in handloom-dense regions like Manur, Sankarnagar (Thalaiyuthu), and Pappakudi in the Tirunelveli district. In these villages, household-based

looms serve as primary income sources, and Cheddi Bhutta sarees form a substantial part of seasonal and ritual-based textile consumption. The consistent demand during festivals, religious ceremonies, and social gatherings ensures a sustainable micro-economy around this motif, supporting not only weavers but also dyers, spinners, and local traders (Tamil Nadu Department of Handlooms and Textiles, 2023).

In recent years, with the rise of slow fashion, handmade luxury, and ethical consumerism, Cheddi Bhutta has seen renewed interest from urban and global markets. Designers and sustainable fashion brands are collaborating with artisans to showcase these motifs on modern garments, upholstery, and home décor, thus expanding their visibility. Revival initiatives led by organizations such as Co-optex and India Handloom Brand (IHB) have incorporated Cheddi Bhutta into premium product lines, helping weavers modernize without compromising tradition (Ministry of Textiles, 2022). These interventions have also encouraged younger generations to continue the craft, thus addressing the threat of occupational discontinuity.

Despite these advancements, intense competition from power looms, synthetic fabrics, and imported textiles continues to challenge the handloom sector. In this scenario, Cheddi Bhutta emerges as a strategic branding asset a motif that signals authenticity, craftsmanship, and

heritage in a market flooded with mass-produced products. Its registration under the Handloom Mark Scheme and alignment with the India Handloom Brand add to its credibility, assuring consumers of quality and ethical sourcing (Textile Committee, 2021). Cheddi Bhutta is not merely a motif it is a symbol of living heritage, embodying the confluence of art, economy, and identity. It preserves the intangible cultural heritage of weaver communities and serves as a sustainable livelihood mechanism in the face of industrial disruption. Safeguarding and promoting such indigenous designs is crucial not only for the economic empowerment of rural artisans but also for the preservation of India's diverse textile legacy in the global cultural economy.

### **1.19.Rationale of the Study**

Handloom weaving is an ancient industry and a vital part of India's textile cottage sector, encompassing a wide range of artisanal activities including cotton and silk weaving, bleaching, dyeing, finishing, hosiery, lace embroidery, silk reeling, and twisting. It serves as the chief source of livelihood for numerous rural families, especially those who rely entirely on weaving for their sustenance. The handloom sector not only supports millions of livelihoods but also contributes significantly to the cultural heritage and economy of several Indian states. According to the Ministry of Textiles (2019), the sector provides employment to more than 4.33 million

people, making it the second-largest employment provider in rural India after agriculture.

Weaving is the central process in the entire handloom production chain, and a handloom is typically defined as a manually operated wooden frame equipped with various tools such as heddles, shuttles, and reeds. The rhythmic sound of the handloom, often described as the music of the rural home, embodies the spirit of craftsmanship and perseverance in many weaving communities (Venkateswaran, 2014). Handloom weaving is one of the most ancient and culturally significant occupations in India, with historical references dating back to the Vedic period. It reflects not only artistic excellence in the form of intricate designs and traditional motifs but also functions as a sustainable and decentralized source of income for millions in rural and semi-urban regions (Jayachitra, 2016; Shamitha & Balasubramanian, 2018).

However, despite its historical and socio-economic relevance, the handloom industry is facing a serious crisis in the modern era. The rapid pace of industrialization and the influence of globalization have led to a significant decline in demand for handwoven fabrics. The influx of cheaper, mass-produced fabrics from power looms and mills has drastically reduced the competitiveness of handloom products in both domestic and international markets (Hegde Pandurang, 2014). As a result, traditional weavers are being pushed to the

economic margins, struggling to sustain their craft in the face of changing consumer preferences and market forces. The younger generation, witnessing the poor returns and social invisibility associated with handloom weaving, increasingly views it as an unviable career path (Naga Raju & Rao, 2014).

Moreover, unlike mechanized textile units, handloom weaving is largely informal and home-based, lacking access to formal institutional support, technology, and modern design innovations. Weavers often rely on traditional methods passed down through generations without exposure to evolving market trends or digital tools. This technological lag, combined with limited financial access and exploitation by middlemen, has left the sector vulnerable and underperforming (Panda & Bhuwania, 2022). Without timely interventions in the form of skill training, design diversification, marketing support, and welfare policies, this age-old craft faces the risk of extinction.

Weaving, as a traditional occupation, has historically fulfilled one of the basic needs of human society, clothing, and has been deeply interwoven with social identity and regional aesthetics (Venkateswaran, 2014). Yet, in the current global economic scenario, where dependency on mechanized systems and foreign inputs is escalating, the handloom sector offers a rare model of sustainable, low-capital, and decentralized economic

activity (Panda & Bhuwan, 2022). It is labour-intensive, environmentally friendly, and generates employment for marginalized communities with minimal ecological impact. Moreover, it plays a key role in rural development and skill preservation, supporting more than 4.33 million workers across India, as per the Fourth All-India Handloom Census (2019–20). The sector not only safeguards traditional weaving knowledge but also contributes significantly to the socio-economic stability of rural households, particularly among women and artisan clusters who rely on handloom as their primary or supplementary source of income.

Handloom Census (Ministry of Textiles, 2019). Despite these strengths, handloom weavers face a multitude of economic hardships. These include irregular income, exploitation by intermediaries, inadequate access to government schemes, and lack of social security and healthcare facilities. Many are caught in cycles of debt and informal labour arrangements without formal recognition or labour rights. Their occupational engagement is marked by physical strain, long hours of labour, poor posture, and lack of ergonomic support, resulting in musculoskeletal disorders, eyesight deterioration, and general fatigue (Bagale & Mahajan, 2022; Sivakkolundhu & Sheeba, 2021). The absence of healthcare benefits, insurance coverage, or workplace safety standards exacerbates these health issues, often leading to early burnout and poverty-linked illnesses.

The handloom sector is also a major source of employment for women, who constitute more than 70% of the workforce (Planning Commission, 2012). Women play an integral role in pre-loom, weaving, and post-loom processes such as dyeing, designing, and finishing. Despite their contributions, women often remain underpaid, underrepresented in leadership roles, and excluded from decision-making within cooperatives or clusters (Shamitha & Balasubramanian, 2018). Thus, the gendered nature of hardship within the sector demands focused research on women's working conditions, safety, and empowerment.

Additionally, the hereditary nature of the craft once ensured continuity and stability; however, younger generations are increasingly reluctant to pursue weaving due to poor returns, social stigma, and lack of opportunities for skill enhancement (Naga Raju & Rao, 2014). The shift away from weaving by youth is not only an economic concern but a cultural one, threatening the preservation of intangible heritage and unique regional textile identities such as Kanchipuram, Kota Doria, or Sambalpuri.

The mental health implications of continuous financial stress, social marginalization, and uncertain futures are also becoming increasingly visible among weaving communities. Depression, anxiety, and feelings of exclusion are common yet rarely documented or addressed in mainstream research or policy (Gundeti,

2018). Furthermore, while several government schemes such as the National Handloom Development Programme (NHDP) and Handloom Weaver Comprehensive Welfare Scheme exist, studies indicate that many weavers are unaware of these programs or unable to access their benefits due to bureaucratic bottlenecks (Rao & Rao, 2015; Panda & Bhuwania, 2022).

The present study aims to investigate the economic hardships and workplace wellness among handloom weavers, focusing particularly on physical and mental health, income insecurity, social support, and gendered vulnerabilities. It seeks to identify the structural causes of hardship, evaluate the effectiveness of current welfare policies, and examine how workplace conditions influence well-being. By addressing these aspects, the study intends to generate empirical evidence to inform policies on fair wages, ergonomic interventions, health support, gender equity, and skill development.

The outcomes of the study will be valuable not only for academic discourse but also for practitioners, policymakers, and civil society organizations working in the areas of rural development, labour welfare, women's empowerment, and cultural sustainability. It will offer actionable insights that can contribute to the revival of the handloom sector as a dignified and sustainable livelihood option, while ensuring that the weavers—its backbone—receive the recognition, safety, and support they rightfully deserve.

To provide effective support and protection to this sector, a coordinated national policy has been evolved by the Government of India through which it is hoped to restructure the living standard of the weaver. As the handloom weaver is at present poorly served in most of these respects, a massive national Handloom Development programme has been launched to ensure adequate and timely supply of yarn, dyes, and chemicals at reasonable prices to the weavers and to rid them of the fear that their product may not be sold. In India, handloom societies are concentrated in the small segment and are mainly concentrated in different parts of the country. On attaining independence, Government of India rightly recognized the important role that the industry can play well and a number of policy measures were formulated and executed to bring the industry on sound footing.

### **1.20.Statement of the Problem**

The handloom sector, once a vibrant and culturally rich industry in India, is now facing severe distress due to multiple socio-economic, technological, and policy-related challenges. Despite being the second-largest employment provider in rural areas after agriculture, handloom weaving is increasingly seen as an unsustainable livelihood due to low and irregular income, lack of job security, inadequate access to government schemes, and growing competition from mechanized textile industries (Ministry of Textiles, 2019). Handloom

weavers often work long hours in poorly ventilated, ergonomically inadequate conditions, which results in severe physical strain and chronic health issues such as musculoskeletal disorders, eye strain, and general fatigue (Bagale & Mahajan, 2022). Additionally, psychological stress due to financial insecurity, market fluctuations, and social invisibility affects their mental and emotional well-being (Gundeti, 2018).

The younger generation is becoming increasingly disinterested in continuing the weaving profession, perceiving it as low-paying and socially devalued (Naga Raju & Rao, 2014). While many government programs exist to support the handloom sector, studies have shown that awareness and accessibility among weavers remain limited, resulting in poor policy outcomes and continued marginalization (Panda & Bhuwania, 2022). Furthermore, women who represent a significant portion of the handloom workforce face additional challenges in the form of wage disparity, lack of recognition, and limited participation in decision-making (Shamitha & Balasubramanian, 2018).

Despite its economic and cultural relevance, the intersection between economic hardships and workplace wellness in the handloom sector remains inadequately explored. Most existing research has focused on production, marketing, or policy design, with limited emphasis on the lived experiences and occupational well-being of weavers. There is a need to understand how

economic pressures, poor working conditions, and lack of social protection impact not only productivity but also the physical and mental health of handloom workers.

Hence, the present study entitled “*Economic Hardships and Workplace Wellness of Handloom Weavers*,” seeks to explore these interlinked dimensions. It aims to identify the root causes of economic vulnerability, assess the physical and psychological effects of workplace conditions, and provide evidence-based insights that can inform more inclusive and human-centered policies for the revival and protection of the handloom weaving community.

### **1.21.Operational Definitions of Important Key Terms**

To ensure conceptual clarity and measurement precision, the following operational definitions have been adopted for key terms used in the present study

#### ***1.21.1.Economic Hardships***

Economic hardships are operationally defined as the measurable and perceived financial strain experienced by handloom weavers due to unstable and insufficient income, high production costs, limited access to financial services, and minimal institutional support. It encompasses both objective indicators, such as low and irregular earnings, indebtedness, lack of savings, and absence of social security, as well as subjective experiences of economic stress and material deprivation.

In the context of this study, economic hardships refer specifically to the financial challenges faced by individuals engaged in traditional handloom weaving, which include difficulties in affording necessities such as food, housing, healthcare, education, and clothing. These hardships are further aggravated by limited access to markets, rising costs of raw materials, declining demand for handwoven products, and the competitive pressure of mechanized textile industries. The construct is measured using indicators such as monthly household income, outstanding debts, household expenditure patterns, savings behaviour, and reliance on external financial assistance.

According to the investigators, economic hardships refer to the extent of financial strain and material deprivation experienced by individuals or households when their income and resources are insufficient to meet essential needs such as food, housing, healthcare, education, and clothing. In the present study, economic hardships specifically relate to the financial difficulties faced by handloom weavers, resulting from irregular earnings, high production costs, debt burden, limited access to stable markets, and inadequate institutional support. It encompasses both objective indicators, such as income level, number of dependents, and access to welfare schemes, and subjective indicators such as perceived financial stress and the ability to cope with daily needs.

### ***1.21.2. Workplace Wellness***

Workplace wellness refers to the collective efforts, programs, and supportive policies implemented within an organization to enhance the physical, mental, emotional, and social well-being of its workforce. It involves comprehensive strategies that aim to foster work-life balance, minimize job-related stress, improve employee engagement, and boost productivity. Elements contributing to workplace wellness typically include access to medical care, psychological support, ergonomic and safe working environments, proper nutrition and fitness guidance, empathetic leadership, flexible scheduling, and avenues for career development.

According to the investigators, in the context of this study, workplace wellness is understood as the degree to which handloom weavers perceive their work environment to be conducive to their health and well-being. This will be examined through factors such as the nature of their physical workspace, availability of rest breaks, access to healthcare, awareness of occupational safety measures, employment stability, and emotional support systems at work. Information will be collected via a structured questionnaire, and responses will be used to compute a composite score that classifies workplace wellness into low, moderate, or high categories.

### ***1.21.3. Handloom Weavers***

Handloom weavers are skilled artisans who manually

operate traditional looms to produce woven fabrics without the use of electricity or mechanized systems. They play a vital role in preserving indigenous textile techniques and cultural heritage, often working within family-based or community-oriented weaving clusters. These artisans typically engage in the entire weaving process, including preparing the warp and weft, operating the loom, and incorporating intricate designs or motifs into the fabric. Handloom weavers are predominantly found in rural and semi-urban areas of India and contribute significantly to the cottage and small-scale textile industries. Their livelihoods are often shaped by factors such as access to raw materials, market conditions, technological support, and government welfare schemes. For the purpose of this study, handloom weavers refer to individuals who are directly engaged in the traditional process of weaving fabric using manually operated looms, either as self-employed artisans, members of cooperative societies, or as wage earners under master weavers. These individuals may work from home-based units or within community-based weaving clusters.

According to the investigators, handloom weavers in this study refer to individuals engaged in the manual weaving of textiles using traditional looms within recognized weaving clusters, particularly in Tirunelveli district. These weavers are characterized by their dependence on handloom work as a primary source of income and their use of non-mechanized, labour-intensive

techniques. The study includes both male and female weavers who are affiliated with cooperative societies or work independently in household-based units. Their socio-economic conditions, workplace wellness, and access to welfare schemes will be explored using structured tools developed by the investigators.

#### ***1.21.4. Veeravanallur***

The handloom weavers of Veeravanallur in Tirunelveli district play a vital role in preserving Tamil Nadu's traditional textile heritage through their expertise in crafting Chedibutta sarees, known for their intricate floral motifs woven using the extra weft technique. Predominantly from the Sowrashtra community, these artisans have sustained centuries-old weaving practices that blend cultural identity with artistic expression. Their craft not only symbolizes aesthetic and cultural richness but also serves as a major source of livelihood in the region, promoting sustainable, eco-friendly practices through the use of natural fibers such as cotton and cotton silk. The recent GI tag recognition has brought renewed attention to their work, enhancing market visibility, helping protect their designs from imitation, and ensuring the continuation of their heritage in a modern context.

#### ***1.21.5. Velanguli***

Velanguli, a village in the Ambasamudram taluk of Tirunelveli district, is a key center for the production of

traditional Chedibutta sarees, woven by skilled artisans of the Sowashtra community. These weavers specialize in crafting handloom sarees featuring intricate floral motifs using the extra weft technique, often employing cotton and artificial silk blends. Velanguli's weavers have upheld this heritage craft for generations, contributing significantly to the local economy while promoting sustainable, eco-friendly textile practices. Their sarees, once widely sold across tourism hubs like Madurai and Kanyakumari and exhibited in major cities such as Mumbai and Bengaluru, have even reached international markets. The village also played an active role in the collective effort to obtain the Geographical Indication (GI) tag for Chedi Butta sarees, reflecting their commitment to preserving and promoting regional textile identity.

#### ***1.21.6.Puthukudiruppu***

Puthukudiruppu, located in the Ambasamudram taluk of Tirunelveli district, is an important village in the Chedibutta saree weaving cluster, alongside Veeravanallur, Velanguli, and Mormadam. The weavers, primarily from the Sowashtra community, are known for their expertise in creating traditional Chedibutta sarees featuring floral plant motifs woven into the border and pallu using the extra weft technique. These sarees are crafted with cotton or cotton silk fabrics and represent a blend of artistic precision and cultural symbolism. The

weaving tradition in Puthukudiruppu supports rural livelihoods, promotes eco-friendly textile practices, and preserves age-old artisan knowledge. The village actively contributed to the successful application for the Geographical Indication (GI) tag, reinforcing both the commercial value and cultural identity of this handloom craft.

### ***1.21.7.Mormadam***

Mormadam, a village in Ambasamudram taluk of Tirunelveli district, is a notable center within the Chedi Butta saree weaving cluster. Artisans here, primarily from the Sowrashtra community, specialize in creating handloom sarees with delicate floral motifs called Chedi Butta, woven across the borders and pallus using the extra weft technique on cotton or cotton silk fabrics. The craft supports local livelihoods, sustains traditional artisan knowledge, and upholds eco-conscious textile practices by relying on natural fibers and manual looms. As part of the collective effort with neighbouring villages, Mormadam's weavers contributed to the successful acquisition of the Geographical Indication (GI) tag for Chedi Butta sarees, a recognition that both protects the authenticity of their work and enhances their cultural and economic visibility.

### **1.22.Objectives of the Study**

1. To find out the level of economic hardships among handloom weavers.

2. To find out the level of workplace wellness among handloom weavers.
3. To find out if there exists any significant difference in the economic hardships of handloom weavers with reference to the gender, type of family, nature of housing, membership in the association, availed bank loan, use of technology, and marital status.
4. To find out if there exists any significant difference in the workplace wellness of handloom weavers with reference to the gender, type of family, nature of housing, membership in the association, availed bank loan, use of technology, and marital status.
5. To find out if there exists any significant difference between the economic hardships of handloom weavers and their educational qualification, type of employment, working hours, and years of experience.
6. To find out if there exists any significant difference between the workplace wellness of handloom weavers and their educational qualification, type of employment, working hours, and years of experience.
7. To find out the relationship between economic hardships and workplace wellness of handloom weavers.

### **1.23.Hypotheses**

**H<sub>01</sub>.** The level of economic hardships among handloom

weavers is moderate.

**H02.** There is no significant difference between male and female handloom weavers in their economic hardships.

**H03.** There is no significant difference between joint family and nuclear family handloom weavers in their economic hardships.

**H04.** There is no significant difference between owned and rented house handloom weavers in their economic hardships.

**H05.** There is no significant difference between handloom weavers with association membership and those without association membership in their economic hardships.

**H06.** There is no significant difference in economic hardships between handloom weavers who have availed bank loans and those who have not availed bank loans.

**H07.** There is no significant difference in economic hardships between handloom weavers who use technology and those who do not.

**H08.** There is no significant difference between unmarried and married handloom weavers in their economic hardships.

**H09.** There is no significant association between educational qualification and economic hardships of handloom weavers.

**H10.** There is no significant association between type of employment and economic hardships of handloom weavers.

**H<sub>11</sub>**. There is no significant association between working hours and economic hardships of handloom weavers.

**H<sub>12</sub>**. There is no significant association between years of experience and economic hardships of handloom weavers.

**H<sub>13</sub>**. There is no significant difference between male and female handloom weavers in their workplace wellness.

**H<sub>14</sub>**. There is no significant difference between joint family and nuclear family handloom weavers in their workplace wellness.

**H<sub>15</sub>**. There is no significant difference between owned and rented house handloom weavers in their workplace wellness.

**H<sub>16</sub>**. There is no significant difference between handloom weavers with association membership and those without association membership in their workplace wellness.

**H<sub>17</sub>**. There is no significant difference in workplace wellness between handloom weavers who have availed bank loans and those who have not availed bank loans.

**H<sub>18</sub>**. There is no significant difference in workplace wellness between handloom weavers who use technology and those who do not.

**H<sub>19</sub>**. There is no significant difference between unmarried and married handloom weavers in their workplace wellness.

**H<sub>20</sub>**. There is no significant association between educational qualification and workplace wellness of handloom weavers.

**H<sub>21</sub>**. There is no significant association between type of employment and workplace wellness of handloom weavers.

**H<sub>22</sub>**. There is no significant association between working hours and workplace wellness of handloom weavers.

**H<sub>23</sub>**. There is no significant association between years of experience and workplace wellness of handloom weavers.

**H<sub>24</sub>**. There is no significant relationship between economic hardships and workplace wellness of handloom weavers.

**H<sub>25</sub>**. There is no significant correlation between economic hardships and workplace wellness of handloom weavers.

## **1.24. Delimitations**

### ***1.24.1. Geographical Scope***

The study is geographically confined to selected handloom weaving communities in Veeravanallur, Velanguli, Puthukudiruppu, and Mormadam, located within the Tirunelveli district, Tamil Nadu. These areas were chosen due to their traditional involvement in handloom weaving and the continued presence of active weaver populations. The study does not include handloom clusters outside these regions. As a result, the findings are specific to the socio-economic and cultural context of these locations and may not apply or be generalized to

other handloom hubs in India that differ in terms of demographic, infrastructural, or policy-related conditions.

### ***1.24.2. Target Population***

The target population of the present study comprises registered and actively engaged handloom weavers residing in the selected study areas of Veeravanallur, Velanguli, Puthukudiruppu, and Mormadam in Tirunelveli district. These individuals are directly involved in the weaving profession, either working independently, as members of cooperative societies, or as wage earners under master weavers. The study focuses on those for whom weaving is a primary livelihood activity. It deliberately excludes retired or inactive weavers, non-weaving family members, individuals employed in mechanized or power loom sectors, and those engaged solely in pre-loom or post-loom processes without direct involvement in weaving. This delimitation ensures that the findings are specifically relevant to the active practitioners of traditional handloom weaving, thereby offering accurate insights into their economic hardships and workplace wellness.

### ***1.24.3. Sample Characteristics***

The sample includes both male and female handloom weavers aged 18 and above. The study does not extend to children or minors assisting in handloom work, even though they may informally participate in some families.

#### **1.24.4. Focus Variables**

The study specifically focuses on the relationship between economic hardships and workplace wellness, including components such as physical health, mental well-being, job satisfaction, and awareness of government welfare schemes. Other related factors, such as consumer behaviour, marketing strategies, and cultural identity, are not covered.

#### **1.25. Organization of the Study**

**Chapter I-Introduction:** This chapter provides an overview of the study. It includes the background of the study, the significance of handloom weaving in India, the statement of the problem, objectives of the study, hypotheses, operational definitions of key terms, the scope and delimitations, and the rationale for selecting the topic. It also discusses the theoretical framework guiding the research.

**Chapter II-Review of Related Literature:** This chapter presents a comprehensive review of previous research studies, reports, and scholarly articles related to economic hardships, workplace wellness, occupational health, and socio-economic conditions of handloom weavers. It identifies gaps in the existing literature that the present study seeks to address.

**Chapter III-Methodology:** This chapter outlines the research design, population, sample, and sampling

techniques, tools and techniques used for data collection, and the statistical methods employed for data analysis. It describes the locale of the study and explains how the variables are measured and analyzed.

***Chapter IV-Data Analysis and Interpretation:*** This chapter presents the analysis of data collected from the field. It includes descriptive and inferential statistics to test the stated hypotheses. Tables, charts, and graphs are used to interpret the findings systematically. The results are discussed in relation to the objectives of the study.

***Chapter V- Summary, Findings, Recommendations, and Conclusion:*** This chapter presents a summary of the study, major findings, and conclusions, educational implications of the study, recommendations, and suggestions for further research in this area.

## **1.26. Conclusion**

The handloom industry in India embodies a confluence of culture, tradition, and livelihood, yet it faces severe socio-economic hardships, market competition, technological lag, and policy gaps. Weavers continue to suffer from workplace hazards, poor healthcare access, and mental stress, while generational attrition threatens the survival of indigenous skills. Nevertheless, the sector holds enduring cultural value by preserving regional identities, sustaining heritage crafts such as Chedi Butta sarees, and fostering women's empowerment through weaving

clusters. Government schemes and cooperative movements have attempted to address weavers' concerns, but gaps remain in effective implementation, skill development, marketing strategies, and digital inclusion. The survival of handloom weaving extends beyond economic concerns, encompassing cultural continuity, social justice, and sustainable development. Focusing on regions such as Veeravanallur, Velanguli, Puthukudiruppu, and Mormadam, this study highlights the interplay of economic hardships, workplace wellness, cultural preservation, and policy interventions. It underscores the urgent need for coordinated efforts by government, NGOs, digital platforms, and youth to ensure the resilience and revival of this heritage industry.

## **CHAPTER-II REVIEW OF RELATED STUDIES**

### **2.0.Introduction**

The handloom industry in India, a cornerstone of rural employment and cultural heritage, has been extensively examined across various states for its socio-economic impact, structural challenges, and sustainability. The review of related literature helps a researcher gain a deep knowledge of the design of the study. It also helps to demonstrate the completed research and the topic under investigation. In any research study, the role of the review of related literature is very important. It gives the researcher an understanding of the previous work that has been done. It enables the investigator to know the means of getting to the frontier in the field. It will give the investigator insight. Thus, information about the specific area of the study can be collected by reviewing the related literature. The review of related studies is an essential part of any investigation. The survey of the related studies is a crucial aspect of the planning of the study. In the words of Turney and Robb (1971), the identification of a problem, the development of a research design, and the determination of the size and scope of the core and intensity with which a researcher has examined the literature related to the intended research. The advantage of the related studies is to provide insight into the statistical methods through which the validity of the results is to be established. According to David (1969), the

literature is reviewed to create the content from the past for the new study to be conducted with new subjects and newly obtained data. The review of literature, according to Borg (1968), “In any field forms the foundation upon which all future work will be built.” According to Mouly (1963), the review of literature “promotes a greater understanding of the problem and its crucial aspects and ensures the avoidance of unnecessary duplication”. Knowledge is growing rapidly. A review of related literature states the status of knowledge on the topic and identifies gaps in it. The gaps in knowledge may be due to methodological difficulties, the lack of studies on the problems, or inconclusive results from studies on the problem. It gets doubled in a very short span of time. The scholars, researchers, and writers go on adding knowledge through their studies and writings. There is a tremendous increase in the number of publications, books, and periodicals in developed and developing countries.

The review of previous studies provides background information to the researcher, which enables him to place suitable emphasis in the analysis and to avoid unnecessary duplication to discover new facts within the purview of the present study. Therefore, it is essential to review the available literature to find out the gaps of research before finally selecting the present topic for study. In this connection, some of the previous studies are presented and analyzed.

## **2.1. Significance of the Review of Related Studies**

The review of related literature is fundamental in establishing the theoretical and empirical grounding of the present study on *economic hardships and workplace wellness among handloom weavers*. A critical analysis of past research helps to contextualize the issues faced by weavers within a broader socio-economic and occupational framework. It provides a comprehensive understanding of the challenges, trends, interventions, and gaps that persist in the handloom sector, particularly in rural India.

Numerous studies have emphasized that the handloom sector, despite being one of the oldest industries in India, remains largely informal and economically fragile (Pratap & Chinnaswamy Naidu, 2015; Sahu & Patnaik, 2021). These studies highlight persistent issues such as income volatility, poor access to institutional credit, weak cooperatives, and lack of social protection, all of which contribute to the deteriorating wellness of weavers. The current review further confirms that many weavers are still excluded from government welfare programs and operate without access to healthcare or insurance (Rani & Sinha, 2020; Subramanian & Iyer, 2021).

Research has also revealed the significant health burdens borne by handloom workers. Ergonomic studies have shown a high prevalence of musculoskeletal disorders (Ghosh, 2021; Panipat Ergonomic Study, 2025), while others have reported chronic fatigue, visual strain, and

respiratory ailments caused by poor working conditions and long hours (Sualkuchi Ergonomic Study, 2020; Tenkasi Study, 2022). These findings validate the importance of examining workplace wellness not just in terms of physical health but also through the lens of mental and emotional well-being.

Furthermore, gender-based studies (Ahmed & Sheereen, 2022; Venkatesan & Pillai, 2022) have revealed how female weavers experience double marginalization economically and socially due to the dual burden of domestic and weaving responsibilities. These issues are exacerbated by limited decision-making power and a lack of targeted support mechanisms, making it critical for the present study to adopt a gender-sensitive perspective.

The review has also highlighted the inadequacy of cooperative structures and the failure of credit and marketing systems to effectively uplift weavers (Rao & Sridhar, 2017; IJRAR, 2017). Though some studies have pointed to the positive role of cooperatives and youth-led design innovation (Banerjee & Narayanan, 2022; Devi & Rajalakshmi, 2021), their benefits have not been equitably distributed. Additionally, studies on digital exclusion (Patel & Joshi, 2020) and seasonal unemployment (Lalitha & Krishnan, 2022) underscore the need for technological and financial reforms in the sector.

This review has therefore played a critical role in identifying the research gap: while several isolated studies have examined economic hardships or occupational

health, very few have holistically explored the interrelation between these two dimensions, economic hardships and workplace wellness, particularly among handloom weavers in specific regional contexts such as Tamil Nadu, Odisha, or Assam. The insights gathered from previous literature have informed the present study's conceptual framework, research design, and the formulation of objectives and hypotheses.

By consolidating multi-dimensional evidence from across India, the review justifies the significance of this research and demonstrates the urgent need for interventions that simultaneously address the economic, physical, mental, and institutional well-being of handloom weavers. This study aims to bridge the identified research gap by offering localized and actionable recommendations that can contribute to policy, practice, and future research.

## **2.2.Review of Related Literature**

The review of related literature explores the economic hardships and workplace wellness of handloom weavers. It highlights issues such as low income, market instability, and poor working conditions. Studies reveal health risks, stress, and lack of social security affecting their well-being. This review identifies gaps and provides a foundation for the present study.

**Andhra Pradesh Government Scheme Evaluation (2025)** assessed welfare initiatives such as subsidized

electricity and health insurance for weavers. The study found that although the policies were well designed, bureaucratic hurdles, poor communication, and lack of documentation prevented effective implementation. Many weavers reported little to no access to these benefits despite being eligible. The findings indicated a clear gap between policy intent and delivery. The authors urged better governance and monitoring to ensure equitable welfare distribution.

**Dharmavaram Women Weaver Study (2025)** revealed that more than 85% of female weavers experienced musculoskeletal pain and eye strain. Their dual burden of domestic responsibilities and weaving work caused high levels of fatigue and burnout. Many lacked institutional support and access to wellness programs. This negatively impacted their productivity and quality of life. The study called for gender-sensitive health and welfare policies to protect women weavers.

**Kota Ergonomic Follow-Up Study (2025)** highlighted the lack of ergonomic awareness among handloom workers. Over 90% of the respondents reported never hearing about occupational safety or ergonomic practices. Most worked in poorly designed environments with low seating and inadequate ventilation. The findings suggested that training and community campaigns could significantly reduce health risks. The study reinforced the

need for proactive educational measures on workplace wellness.

**Kota, Rajasthan Study (2025)** confirmed that musculoskeletal disorders were widespread among handloom weavers. The majority of participants were unaware of occupational health standards and lacked guidance on safe work practices. Common problems included back pain, joint stiffness, and fatigue from prolonged static postures. The study recommended community-based physiotherapy programs and health awareness workshops. It emphasized that education and preventive care are essential to improving weavers' wellness.

**Madraswala et al. (2025)** studied ocular health problems among weavers in Salem, Tamil Nadu, and found a high prevalence of eye strain and refractive errors due to prolonged near work under poor lighting. Visual discomfort was shown to reduce both productivity and accuracy in weaving. The lack of routine eye checkups and access to spectacles worsened these issues. The findings underscored the urgent need for workplace adaptations such as better lighting and visual ergonomics. The authors concluded that eye health is a vital but neglected component of workplace wellness.

**Panipat Ergonomic Study (2025)** surveyed over 150 weavers and reported that nearly 80% suffered from health issues such as eye strain, respiratory discomfort,

and back pain. Poor posture, dust-filled work environments, and repetitive motions were major causes. Financial hardship restricted workers from seeking timely medical attention. The research emphasized that occupational health education and preventive measures were urgently needed. It concluded that workplace wellness must be integrated into economic revival plans for the handloom sector.

**Stalin et al. (2024)** examined physiotherapy-based exercise interventions in Kanchipuram District. The quasi-experimental study revealed that regular exercise sessions reduced pain in the neck, shoulders, and lower back. Participants also reported improved energy and reduced fatigue. The findings demonstrated that structured wellness interventions can enhance both health and work efficiency. The authors recommended integrating exercise-based wellness programs into cooperative society structures.

**Durlov et al. (2023)** conducted an ergonomic intervention study testing a 5–10-minute work–rest cycle among weavers. The modified schedule significantly reduced cardiovascular strain, visual fatigue, and musculoskeletal discomfort. Productivity levels remained stable, and in some cases, weaving quality improved. The study proved that simple, low-cost ergonomic interventions could prevent chronic health problems. It recommended wider

adoption of structured work–rest practices in weaving clusters.

**Meher and Mishra (2023)** analyzed the implementation of the Weaver Mudra Loan scheme. While many weavers used loans to buy yarn or upgrade looms, few invested in workplace safety or medical needs. The study argued that credit access alone cannot address wellness. It suggested combining loan disbursements with health subsidies such as ergonomic kits and medical support. The findings emphasized the need for integrated financial and wellness policies.

**Ahmed and Sheereen (2022)** examined gender disparities in the weaving workforce of Uttar Pradesh. Their study found that women were disproportionately burdened with both domestic responsibilities and weaving labour. This dual workload resulted in higher fatigue, poor nutrition, and psychological stress. Women also lacked decision-making power in workplace matters. The study concluded that policies must address gender-specific wellness concerns in the weaving sector.

**Bagale and Mahajan (2022)** conducted a study on artisan women in South India, linking financial instability with poor nutrition, chronic stress, and reduced productivity. Many women lacked access to formal banking and welfare schemes. This socio-economic vulnerability worsened their physical and emotional health. The authors emphasized the need for financial inclusion programs

targeting artisan women. They concluded that wellness interventions must integrate economic empowerment.

**Banerjee and Narayanan (2022)** studied the role of youth in revitalizing handloom clusters. They found that educated young members introduced innovations such as better health awareness and modern marketing techniques. These efforts helped older weavers adopt safer working conditions. Improved practices contributed to reduced stress and improved productivity. The study concluded that generational change can positively influence workplace wellness.

**Chandrasekar and Natarajan (2022)** examined the socio-economic resilience of handloom households in Tamil Nadu. Findings showed that most weavers struggled with low and inconsistent income, limiting their ability to afford nutrition and healthcare. Rising input costs forced families into deeper poverty. The research pointed out that despite government schemes, poor implementation left workers vulnerable. The study recommended targeted financial and health policies for weavers' sustainability.

**Lalitha and Krishnan (2022)** explored the mental health effects of seasonal unemployment among rural weavers. They found increased anxiety, sleeplessness, and depression during months of low demand. Men reported feelings of inadequacy when unable to provide for families, while women internalized stress and social

withdrawal. The study emphasized that workplace wellness programs must also include mental health support. It recommended counselling and support groups for affected households.

**Singh (2022)** validated a work-related well-being model for handloom weavers in Varanasi. The study showed that job satisfaction and engagement were positively associated with wellness, while occupational stress reduced it. The model highlighted that psychosocial and organizational factors are as important as physical health. It offered a framework for evaluating well-being in informal craft sectors. The findings reinforced the value of holistic workplace wellness assessments.

**Sundaravadivel et al. (2022)** studied visual health challenges among silk weavers and reported a high prevalence of binocular vision anomalies and eye strain. These issues were directly linked to sustained near work and poor ergonomic design of looms. Untreated vision problems reduced accuracy and efficiency in weaving. The study highlighted the lack of access to routine eye care services in rural weaving clusters. It recommended workplace modifications and regular eye examinations to protect visual wellness.

**Tenkasi, Tamil Nadu Study (2022)** reported that repetitive labour and exposure to dust and noise in weaving centers caused fatigue and respiratory issues. Many workplaces lacked drinking water facilities and rest

areas. Weavers often continued working despite health challenges due to financial need. The study showed that poor infrastructure directly worsened workplace wellness. It called for low-cost health and infrastructure improvements in weaving hubs.

**Uttar Pradesh Socioeconomic Survey (2022)** documented how shortages of raw materials and delayed payments created chronic economic instability for weavers. This instability directly impacted health, as many workers skipped medical treatment due to low incomes. Stress and anxiety were prevalent among households affected by financial uncertainty. The findings linked economic hardship to physical and mental health decline. The study concluded that improving financial security is vital for workplace wellness.

**Devi and Rajalakshmi (2021)** examined the role of cooperatives in shaping the wellness of weavers in Tamil Nadu. Their findings showed that strong and well-managed cooperatives improved income stability, morale, and reduced occupational stress. On the other hand, poorly functioning cooperatives failed to provide economic or social benefits, leaving workers as vulnerable as those in unorganized sectors. This study revealed how organizational quality had a direct impact on the psychosocial and economic well-being of artisans. It also noted that members of well-functioning cooperatives reported higher social bonding and

community trust. The authors recommended that wellness initiatives should be embedded within cooperative structures for greater scalability. They concluded that governance reform is a prerequisite for improving health and working conditions in the sector.

**Ghosh (2021)** investigated occupational hazards among handloom weavers, finding high rates of vision problems, respiratory issues, and musculoskeletal disorders. Poor ventilation, long hours of repetitive work, and inadequate lighting were major contributors to these conditions. Financial limitations meant that many weavers delayed or avoided treatment, which aggravated their health problems. This study highlighted how structural deficits in the workplace directly translated into chronic health burdens. Ghosh also emphasized that poor health among weavers led to reduced productivity and absenteeism, which worsened economic hardship. The findings suggested that wellness interventions must address both environmental conditions and healthcare access simultaneously. Overall, the study underscored that sustainable handloom production is inseparable from worker health and safety.

**Joseph and Raj (2021)** studied the impacts of market volatility and raw material inflation on the wellness of weavers in Tirunelveli, Tamil Nadu. They reported that price fluctuations and delayed payments pushed families into debt and reduced their ability to invest in healthcare.

Weavers under such financial stress often skipped meals, delayed medical consultations, and worked excessive hours, leading to physical and emotional burnout. The study revealed how unstable incomes directly weakened workplace wellness. The authors recommended forming producer companies and setting minimum support prices (MSP) for handloom products to safeguard livelihoods. They argued that stabilizing incomes would improve weavers' health, nutrition, and overall quality of life. The study concluded that income security and wellness are interdependent in sustaining the handloom industry.

**Sahu and Patnaik (2021)** assessed socio-economic transitions among Odisha's handloom weavers, focusing on outdated production techniques and poor marketing systems. The study found that health-related absenteeism was high, especially among older weavers who were unable to afford treatment or rest. Economic instability forced many to work through illness, worsening their physical conditions. The research demonstrated that poverty and poor workplace wellness reinforced each other in a vicious cycle. The authors stressed that without innovations and modern tools, productivity and health would continue to deteriorate. They recommended introducing cluster-level health insurance and ergonomic upgrades to strengthen both livelihoods and wellness. Their study concluded that occupational health must be prioritized as part of modernization policies in Odisha.

**Chatterjee and Jain (2020)** evaluated the standard of living and quality of life of Kota Doria weavers. The research showed that government schemes intended to support weavers often failed due to weak implementation and monitoring. Many families remained trapped in poverty, which limited their ability to afford healthcare. Stress and health problems were common among these households. The study argued that grassroots-level accountability mechanisms are necessary for policy success. It concluded that without effective delivery, welfare policies will not improve wellness or livelihoods. The findings highlighted the gap between policy intent and practical outcomes.

**Informal Labour Structure Study (2020)** examined the vulnerabilities of handloom weavers working without formal contracts or social security. The study showed that a lack of legal recognition exposed workers to wage cuts, layoffs, and hazardous working conditions. Many continued to work while ill to avoid loss of income, which worsened their health conditions. The absence of protections created a cycle of poverty and poor wellness. The study emphasized the need for registering weavers under labour laws and extending insurance coverage. It concluded that legal reforms are a critical step toward safeguarding health and ensuring decent work.

**Majeed et al. (2020)** focused on the carpet weaving community of Pulwama, Jammu and Kashmir,

highlighting low wages, limited education, and poor health as persistent problems. Exploitation by master weavers and middlemen left artisans vulnerable to poverty and workplace stress. Many workers reported chronic illnesses and absenteeism, which reduced their income further. The study found that economic vulnerability and wellness deficits were deeply interconnected. It recommended direct market access and stronger regulation of middlemen to improve both livelihoods and workplace wellness. The authors concluded that empowering artisans economically is crucial to protecting their health and dignity.

**Patil and Deshmukh (2020)** examined health-related absenteeism among handloom weavers in Maharashtra, especially those above the age of 45. The study found that workers lost up to 25 days annually due to illness such as arthritis, dehydration, and exhaustion. Most avoided treatment to prevent wage loss, which worsened long-term health outcomes. This created a recurring cycle of illness and poverty. The authors recommended wage protection schemes and on-site first aid services to reduce absenteeism. The study concluded that age-sensitive wellness interventions are essential for sustaining older workers in the sector.

**Pondicherry Health Study (2020)** explored the impact of poor workplace hygiene, dim lighting, and overcrowding on the wellness of handloom weavers. The

study documented frequent respiratory infections, headaches, and ergonomic strain among workers. Limited access to clean water and sanitation facilities further worsened health outcomes. It was observed that most units lacked rest areas and first aid resources. The findings stressed that basic infrastructure improvements could greatly enhance both wellness and productivity. The study recommended municipal-level support to upgrade weaving clusters with essential health and sanitation facilities. It concluded that improving workplace hygiene is foundational to sustaining artisan livelihoods.

**Rani and Sinha (2020)** studied informal employment among handloom weavers in Eastern India and found that over 87% lacked contracts and social security. This absence of protection left workers highly vulnerable to health and income shocks. Financial insecurity meant that many weavers worked through illness, which aggravated their problems. The study showed that informality perpetuates both economic and wellness challenges. The authors recommended formal registration and inclusion in national labour databases. They concluded that recognition and legal protection are fundamental to improving workplace wellness.

**Sivasubramanian and Rajendran (2020)** analyzed the living and working conditions of home-based weavers in Chennai, Tamil Nadu. The study showed that cramped, poorly ventilated, and unhygienic workspaces contributed

to fatigue, eye strain, and musculoskeletal problems. Because most households doubled as workplaces, the lack of proper infrastructure made ergonomic improvements difficult. Economic hardship prevented investment in better tools or workspace modifications. The study found that such conditions not only harmed wellness but also lowered weaving output. The authors recommended the creation of urban weaving hubs with shared infrastructure and ventilation systems. They concluded that wellness and productivity are mutually reinforcing and require structural interventions.

**Sualkuchi, Assam Study (2020)** investigated the ergonomic challenges faced by handloom weavers. The research documented widespread musculoskeletal pain due to static postures, low seating arrangements, and extended weaving hours. Weavers often lacked knowledge of preventive ergonomic practices, which intensified health issues. The findings suggested that physical strain not only affected individual wellness but also reduced efficiency at the cluster level. The study recommended low-cost ergonomic interventions such as adjustable seating and posture training. It concluded that addressing ergonomic challenges is critical to sustaining handloom weaving in Assam. By linking ergonomics with wellness, the study emphasized preventive strategies as essential for artisans' health and productivity.

**Sharma and Meena (2019)** used ethnographic methods to explore the livelihood and wellness challenges of handloom households in Rajasthan. The study found that income from weaving alone was insufficient, leading families to depend on child labour, seasonal migration, and multitasking. Preventive healthcare was often neglected, as daily sustenance took priority. Poor diet and unsafe housing further worsened health conditions, increasing vulnerability to chronic illnesses. The research emphasized that livelihood insecurity directly eroded both physical and mental wellness. It concluded that poverty alleviation and workplace wellness must be addressed together. The authors recommended linking weaving livelihoods with healthcare access and nutritional support.

**Bishnupur, West Bengal Study (2018)** evaluated the role of cooperative membership in shaping wellness outcomes. The study revealed that cooperative members enjoyed steadier income, better savings habits, and reduced financial stress compared to non-members. This financial stability translated into improved mental well-being and reduced vulnerability to health shocks. Access to shared resources and collective sales also reduced exploitation by middlemen. The findings showed how social structures like cooperatives can buffer economic and health risks. The authors recommended expanding cooperative membership to enhance worker resilience. They concluded that social capital plays a critical role in

sustaining wellness among weavers.

**Gundeti (2018)** assessed the working conditions of khadi weavers and found that many were not receiving minimum wages. Long working hours, harsh conditions, and lack of social security characterized their livelihoods. This placed workers at risk of both physical and mental health problems. The study highlighted that low wages prevented investments in nutrition, housing, and healthcare, creating cycles of poverty and illness. It recommended wage protection legislation and the formation of worker cooperatives. The authors argued that ensuring fair wages is essential for sustainable wellness in the khadi sector. They concluded that economic justice must form the basis of occupational wellness policies.

**Jayachandra and Subramanyam Naidu (2018)** studied the functioning of cooperative societies in Andhra Pradesh. They found that many cooperatives were inactive due to poor management and financial inefficiencies. This weakened the collective bargaining power of weavers and reduced their access to inputs and markets. As a result, families experienced declining incomes, poverty, and worsening health conditions. The research stressed that effective cooperative management could improve both economic security and wellness. The authors recommended leadership training, audit reforms, and government support to revive cooperative societies. They concluded that strengthening cooperatives is vital

for ensuring workplace wellness and socio-economic stability.

**Kundu (2018)** analyzed caste-based exclusion in West Bengal's weaving sector. The study found that minority groups and lower-caste weavers were systematically excluded from cooperative memberships, training programs, and subsidy schemes. This exclusion led to lower incomes, reduced access to welfare, and psychosocial stress. Workers reported feelings of inferiority, low motivation, and poor self-esteem. The research highlighted that inequities in policy delivery worsened both economic hardship and wellness. The authors recommended caste-sensitive frameworks and targeted interventions to ensure inclusion. They concluded that workplace wellness initiatives must address social inequalities as well as occupational health.

**Telangana Ergonomic Study (2018)** examined the effects of poor workplace design in weaving units. The study reported widespread respiratory problems due to dust and inadequate ventilation, alongside hearing loss caused by prolonged noise exposure. High absenteeism was observed among workers with severe symptoms, reducing productivity and incomes. Preventive practices such as protective equipment or ergonomic adjustments were rarely adopted due to lack of awareness. The findings highlighted that simple interventions like improved ventilation could significantly reduce health

risks. The study concluded that ergonomic wellness should be prioritized in occupational health policies for weaving clusters. It called for cluster-level training and awareness programs to reduce strain-related illnesses.

**Chand and Gere (2017)** examined professionalism and market knowledge among weavers. The study found that many artisans lacked awareness of modern marketing practices and business strategies, limiting their competitiveness. As a result, incomes were unstable, and workplace improvements were deprioritized. The authors highlighted that a lack of professional skills translates into greater financial and health vulnerability. They recommended providing training in business, branding, and market diversification. The study concluded that linking commercial skills with workplace wellness can create sustainable livelihoods.

**Roy and Chauhan (2017)** explored the structural challenges of the weaving industry, reporting that most workers were men with low educational attainment. Poor working conditions, low wages, high raw material costs, and lack of capital persisted across regions. Limited government support failed to reach many beneficiaries, leaving gaps in welfare delivery. The study found that these factors directly worsened physical and psychological wellness. The authors emphasized the need for skill development programs and better policy

execution. They concluded that economic revitalization and wellness improvements must go hand in hand.

**Srinivasa Rao and Sreedhar (2017)** studied the condition of weavers in Gannavaram Mandal, Andhra Pradesh. Their research revealed that poor cooperative performance and entrenched low incomes left households highly vulnerable. Economic difficulties were passed from one generation to the next, deepening hereditary poverty. The study found that weak governance in cooperatives limited investment in workplace improvements. Weavers faced constant stress, illness, and poor living conditions. The authors stressed the need for structural reforms and financial empowerment of cooperatives. They concluded that transparent governance and accountability are essential to improve wellness in the sector.

**Sadanandam (2016)** surveyed 57 weaving societies in Warangal district, Telangana, to analyze economic and social challenges. The findings revealed poor wages, outdated machinery, and inadequate government support. These deficits translated into poor working conditions, high rates of musculoskeletal disorders, and financial insecurity. Weavers often lacked the resources to invest in ergonomic improvements or health services. The study emphasized the importance of upgrading equipment and providing targeted financial assistance. It concluded that cooperative reform and modernization are vital for both

productivity and wellness. The authors recommended embedding health programs into cooperative structures.

**Anumala (2015)** examined demographic influences on consumer satisfaction with handloom products. The study acknowledged that technological advancements had weakened the sector, but cultural and social relevance kept it significant. Stable demand improved incomes and indirectly benefited wellness. The authors recommended strategies to target specific consumer groups. They concluded that consumer-driven demand generation is essential for supporting wellness in weaving households.

**Das (2015)** investigated the Dhanekhali handloom sector in West Bengal, renowned for cotton saris. The study reported low and inconsistent incomes, high input costs, and weak domestic demand. Workers, mostly men with low education, suffered from financial stress and poor health outcomes. Lack of marketing infrastructure and credit facilities worsened the situation. The study highlighted the urgent need for subsidies and credit schemes to stabilize livelihoods. It concluded that financial relief is key to improving workplace wellness and sustaining weaving communities.

**Kalyani and Acharyulu (2015)** conducted a case study on APCO handloom cooperatives in Secunderabad to understand consumer satisfaction. Their findings showed that demographic variables such as age, gender, and income influenced customer loyalty and demand. By

strengthening marketing strategies, cooperatives could stabilize incomes and improve member wellness. The study highlighted that steady demand protected workers from income shocks and stress. It concluded that customer-oriented strategies have indirect wellness benefits for artisans. The authors recommended market research and product innovation to enhance competitiveness.

**Patra and Dey (2015)** studied the profitability of handloom products in Cuttack, Odisha, through statistical analysis. The study found that handloom weaving could be economically viable with better product design and pricing strategies. However, poor profitability restricted investments in workplace health and safety. The findings emphasized that commercial success is closely linked to worker wellness. The authors recommended policy support for product innovation and marketing assistance. They concluded that aligning handloom products with consumer demand can enhance both economic stability and workplace well-being.

**Pratap and Chinnaswamy Naidu (2015)** highlighted the resilience of professional and skilled handloom households in sustaining weaving traditions. Despite industrial competition, these households continued weaving as a primary livelihood source. The study found that weaving contributed to cultural preservation while ensuring rural employment. However, unstable incomes

limited access to healthcare and nutrition, weakening wellness. The authors emphasized that policies should protect skilled households through marketing and financial support. They concluded that sustaining this group is crucial for cultural and economic sustainability. The study called for welfare schemes tailored to protect traditional artisans.

**Rakhin (2015)** examined challenges in integrating handloom products with modern fashion markets. The study found that a lack of collaboration with designers limited value addition and profits. With thin margins, weavers struggled to improve their workplaces or health conditions. The findings highlighted that creative integration could increase incomes and improve wellness simultaneously. The authors argued that innovation is essential to make handlooms commercially viable. They concluded that design-driven growth can strengthen both wellness and sustainability. The study recommended market diversification as a long-term strategy.

**Tanushree (2015)** studied weavers in Varanasi, categorizing them into independent, contract, loom-less, and cooperative workers. The study found that vulnerability varied by type, with loom-less and contract weavers being the most disadvantaged. Cooperative members fared better due to shared resources but still faced issues such as inadequate wages and design challenges. Poor financial stability restricted investments

in health and workplace improvements. The research stressed that differentiated support is necessary for different categories of weavers. It concluded that organizational structure directly shapes wellness outcomes. The authors called for targeted welfare interventions based on worker type.

**Varghese and Salim (2015)** explored the decline of Kerala's handloom sector despite its rich heritage. The study revealed that economic challenges and operational inefficiencies undermined both livelihoods and wellness. Workers faced poor wages, outdated practices, and limited policy support. Despite this, the sector retained significant employment potential. The authors recommended urgent reforms to harness this potential. They concluded that revival of Kerala's handloom sector would improve wellness outcomes and preserve cultural identity.

## **2.3. Critical Review of Literature on the Indian Handloom Sector**

### ***2.3.1 Methodological Strengths and Limitations***

The studies reviewed employ a wide variety of methodologies, including ethnographic research (Sharma & Meena, 2019), descriptive studies (Tanusree, 2015), field surveys (Panipat Ergonomic Study, 2025), case studies (Jayachandra & Subramanyam Naidu, 2018), and statistical analysis (Patra & Dey, 2015). This methodological diversity contributes to a holistic

understanding of the handloom sector by offering both quantitative data and rich qualitative insights.

However, several recent studies, such as those by Ahmed and Sheereen (2022), lack methodological transparency regarding sampling techniques, data triangulation, or validation procedures. This raises concerns about generalizability and potential bias. Moreover, many 2025 studies are limited to small or region-specific samples, which, while contextually rich, restrict broader applicability and comparative analysis across regions.

### ***2.3.2. Thematic Breadth and Depth***

The literature spans an impressive range of interrelated themes, providing insights into both structural issues and potential pathways for reform.

***Occupational Health Hazards:*** Numerous studies confirm the prevalence of musculoskeletal disorders, eye strain, respiratory conditions, and ergonomic stress among weavers (e.g., Kota, Panipat, Pondicherry, and Sualkuchi studies). The consistency of these findings across regions and timelines underscores a systemic neglect of occupational safety standards.

***Socio-Economic Vulnerability:*** Chronic poverty, indebtedness, delayed payments, and seasonal unemployment are widespread (Uttar Pradesh Socioeconomic Survey, Sharma & Meena, 2019; Joseph & Raj, 2021). These economic stressors have direct

consequences on nutrition, health, and mental well-being, creating a cycle of vulnerability and decreased productivity.

***Gender Disparities:*** Studies like the Dharmavaram Women Weaver Study and research by Ahmed & Sheereen (2022) highlight the dual burden of wage labour and unpaid domestic responsibilities borne by women weavers. However, intersectional analyses considering caste, religion, and locality are notably sparse, limiting the depth of understanding about compounded marginalities.

***Policy and Implementation Gaps:*** Despite a proliferation of welfare schemes (e.g., subsidized electricity, health cards, Mudra loans), implementation challenges persist due to bureaucratic inefficiencies, lack of awareness, and poor targeting (Andhra Pradesh Evaluation, Meher & Mishra, 2023). Chatterjee & Jain (2020) and Venkateswaran (2014) offer critical insights into the policy-practice disconnect at the grassroots level.

***Revival Strategies and Innovations:*** A small but insightful body of research proposes sustainable solutions. Banerjee & Narayanan (2022) emphasize youth-led innovation and cluster revitalization, Goswami & Jain (2014) advocate for eco-friendly practices, and Devi & Rajalakshmi (2021) document the positive outcomes of well-managed cooperative societies. These models present scalable alternatives, though their wider applicability remains under-researched.

## **2.4. Research Gap**

Despite a growing body of literature on the handloom sector, substantial research gaps persist—particularly at the intersection of economic hardships and workplace wellness. While numerous studies highlight chronic poverty, irregular income, indebtedness, and lack of formal credit access, few explore how these financial stressors translate into long-term physical and mental health deterioration among weavers. Most existing research treats economic conditions and occupational health as separate domains, failing to investigate how financial instability compounds workplace hazards such as repetitive strain, poor posture, and exposure to dust or noise in ill-equipped environments. The mental health dimension covering stress, anxiety, burnout, and depression remain significantly underexplored, despite consistent indications that economic deprivation and precarious employment undermine emotional well-being. Furthermore, although many weavers operate in informal labour structures with no job security, social protection, or written contracts, there is limited analysis on how these vulnerabilities inhibit access to medical care or health insurance.

Gender-based disparities, particularly the dual burden faced by women due to domestic labour and wage weaving, are acknowledged in scattered studies but are seldom analyzed through an intersectional lens that includes caste, marital status, or geographical location.

Technological gaps also exacerbate the issue, as many weavers are excluded from digital platforms, ergonomic innovations, or upgraded tools due to their financial constraints. Additionally, although the poor implementation of welfare schemes is frequently cited, there is a lack of research proposing participatory, community-based mechanisms to improve accountability and accessibility. Regional imbalances in research remain evident, with inadequate coverage of the North-East, tribal belts, and urban home-based weaving communities, many of which face unique combinations of economic and health-related stress.

Moreover, environmental and infrastructural factors such as overcrowded workspaces, lack of sanitation, and insufficient lighting are often mentioned but not systematically linked to economic deprivation or policy design. Crucially, there is a lack of longitudinal studies that examine how sustained exposure to poverty and unsafe work environments erodes resilience, productivity, and intergenerational occupational continuity. These critical gaps underscore the urgent need for integrated, interdisciplinary research that not only examines how economic hardships directly impact workplace wellness but also generates context-sensitive, inclusive policy recommendations for improving the well-being and dignity of handloom weavers across India.

## **2.5. Conclusion**

The review of existing literature reveals a fragmented yet

insightful understanding of the economic and health-related challenges faced by handloom weavers across India. While various studies have contributed significantly to identifying issues such as poverty, low wages, occupational hazards, and gender disparities, there remains a substantial gap in comprehensively analyzing how economic hardships and workplace wellness are interlinked. The lack of integrated research that examines financial instability alongside physical and mental health outcomes limits the development of holistic solutions. Furthermore, underrepresentation of marginalized regions, insufficient focus on mental health, and the absence of longitudinal data continue to obscure the full extent of weavers' vulnerabilities. Addressing these gaps is essential for informing inclusive policies that promote not just economic upliftment, but also sustainable well-being and dignity of labour for handloom weavers. Future research must adopt interdisciplinary, intersectional, and participatory approaches to bridge the divide between economic resilience and occupational wellness, ensuring that the handloom sector thrives both as a cultural heritage and a viable livelihood.

## **CHAPTER III- RESEARCH METHODOLOGY**

“Research design is a master plan specifying the methods and procedures for collecting and analysing the needed information”  
- *William Zikmund*

### **3.0. Introduction**

This chapter presents the methodology adopted for conducting the research, providing a structured explanation of the research philosophy, design, and techniques employed to ensure the validity and reliability of the study. A well-articulated research methodology is essential for addressing the research problem systematically and scientifically. According to Creswell and Creswell (2018), the research process begins with identifying a clear philosophical worldview that guides the overall inquiry. Research philosophy shapes how the researcher understands reality (ontology), the nature of knowledge (epistemology), and the best ways to investigate phenomena (methodology), thus influencing the entire research approach.

Understanding the research approach, procedures, and tools is fundamental for generating credible and evaluable results. As Saunders, Lewis, and Thornhill (2019) emphasize, a comprehensive understanding of the research methodology ensures methodological coherence, which strengthens the trustworthiness and generalizability of findings. Research is not a random or chaotic activity—it is a formal, logical, and structured process aimed at

discovering new knowledge or validating existing theories (Kumar, 2019). It provides a framework to test hypotheses, analyze relationships between variables, and uncover insights that contribute to theoretical and practical advancements.

The purpose of this chapter is to outline the planning and execution of the research process, which includes selecting appropriate methods for data collection, analysis, and interpretation. Planning plays a crucial role in the success of any research endeavour. As Kothari (2004) suggests, the appropriate choice of research strategies and instruments enables a more focused and efficient investigation, fostering depth of understanding and ensuring the research questions are adequately addressed. Chapters One and Two provided the context and literature review relevant to the research topic. This chapter shifts the focus toward methodological choices and their justification. Careful planning, coupled with the selection of suitable qualitative or quantitative methods, is vital for conducting a robust study and achieving valid conclusions (Creswell & Poth, 2017). The effectiveness and credibility of any research depend not only on what is studied but also on how it is studied, underscoring the importance of methodological rigor throughout the investigation.

### **3.1. Research Methodology and Design of the Study**

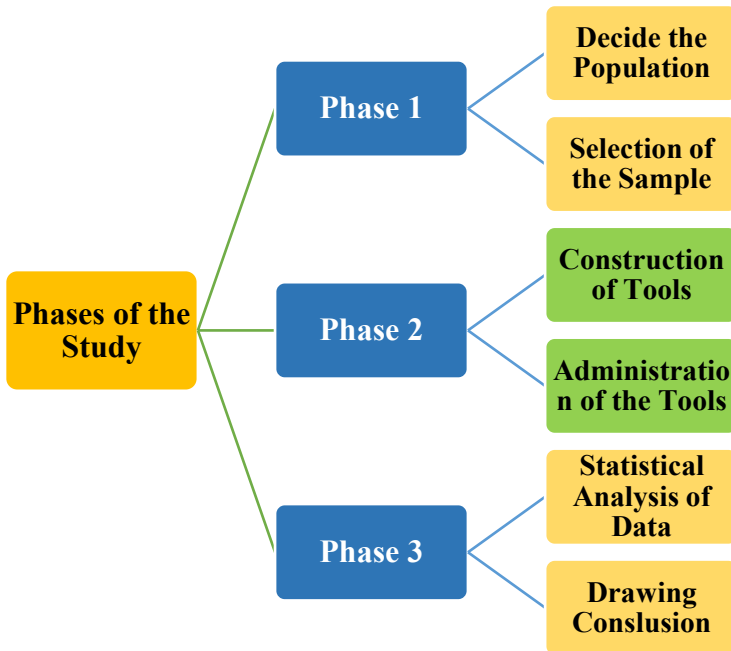
A research design is the arrangement of conditions for the

collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure. It constitutes the blueprint for the collection, measurement, and analysis of data. As such, design helps the researcher to write the hypotheses and their operational implications for the final analysis of data (Kothari, C.R. 2004). Research is often described as an active, diligent, and systematic process of inquiry aimed at discovering, interpreting, and revising facts. The research methodology is the cardinal concept of any research endeavour. Methodology is the science of appropriate modes and order of procedure. It is the plan, structure, and strategy of study that ought to obtain answers to the research posed questions. There are many ways of thinking about and categorizing the wide variety of methods available for designing, carrying out, and analyzing the data and results of research. Different kinds of research approaches produce different kinds of knowledge about the phenomena under study. The term method can be understood to relate mainly to the tools of data collection or analysis techniques (Blaxter, Hughes and Tight, 2010).

Research design is the blueprint of procedures that enable the researcher to test hypotheses in order to arrive at valid conclusions and identify relationships between variables. It refers to the conceptual framework within which the research is conducted. The descriptive method is concerned with surveying, describing, and investigating

existing phenomena, issues, conditions, or relationships. It involves hypothesis formulation and testing, analyzing the relationship between non-manipulated variables, and developing generalizations (Best & Khan, 2008).

***Figure 3.1 Schematic Representation of the Design of Phases Employed in the Study***



Descriptive survey method was employed for the present study. The investigators randomly selected 147 handloom weavers in Tirunelveli district. First phase includes decide the population, the selection of samples involved in the

study with due representation to gender, type of family, nature of housing, member of the association, availed bank loan, use of technology, marital status, educational qualification, type of employment, working hours, and years of experience. The second phase consisted of the preparation and validation of the tools to measure the selected variables and the administration of the tools for collecting the data. The third phase includes the analysis of the data using suitable statistical procedures and drawing conclusions.

This chapter indicates the details related to the methodology and the procedures followed in this study. It includes the research design of the study, the method adopted for the study, the variables included in the study, population and sample, tools used in the study, details regarding the development of the tools, the Questionnaire on Economic Hardships and Workplace Wellness, and the statistical procedures adopted in the study. This chapter deals with the questionnaire on economic hardships and workplace wellness, the different phases of the construction of the tools, the validity and reliability of the tools, and a description of the standardized tool test. It also gives an account of Population, Sampling technique, and the Sample, Scoring, and Tabulation of Data, and Statistical techniques adopted. The methodology adopted for the investigation is discussed under the following headings:

- Method Used in the Present Study

- Variables of the Study
- Tools Used for the Study
- Preparation of Tools
- Population and Sample for the Study
- Scoring and Tabulation of Data

### **3.2.Variables of the Study**

Variables are the conditions or characteristics that the researcher observes. Variables are something that varies. In social research, nearly all aspects of human being and their environment are considered as variables. In the present study, the researcher has used two types of variables for the study, such as demographic variables and independent variables.

### **3.3.Demographical Variables**

Demographic variables are the fundamental characteristics of respondents that may influence research outcomes. Often referred to as basal variables, they cannot be altered by the investigators but provide essential background information for analysis. Variables such as gender, type of family, nature of housing, membership of the association, availed bank loan, use of technology, marital status, educational qualification, type of employment, working hours, and years of experience help researchers understand the diversity of the sample and examine how these factors affect the primary variables

under study. Including demographic variables strengthens the validity and reliability of research findings.

### **3.4. Population and Sample of the Study**

Population generally refers to any collection of a specified group of human beings or non-human entities, such as objects, institutions, events, or geographical areas that share common characteristics. Clearly defining the population is a crucial step in research, as it determines the scope, relevance, and generalizability of the findings. The population provides the framework from which a representative sample is drawn, ensuring that the study results accurately reflect the larger group under investigation. In the present study, the investigators selected handloom weavers in Tirunelveli district as the population. This group was chosen because handloom weaving forms an important traditional occupation in the district, contributing significantly to the local economy, culture, and livelihood of families. Studying this population allows the researcher to explore issues related to economic hardships, workplace wellness, and socio-cultural challenges faced by weavers in the region. Defining the population in this manner also enables the formulation of appropriate sampling techniques and ensures that the research findings are contextually meaningful and academically valid. Sampling is the process of selecting a representative subset from the population to make valid inferences about the whole. It

enables researchers to study variables within a smaller group when studying the entire population is not feasible. Sampling methods are broadly classified into probability sampling and non-probability sampling, chosen based on the study's objectives and context. In the present study, the investigators adopted a survey method to select handloom weavers in Tirunelveli district, ensuring that the sample accurately reflected the population.

### **3.5. Methodology**

The present study focuses on the economic hardships and workplace wellness of handloom weavers, for which the investigators adopted the descriptive survey method. This design is appropriate as it facilitates the systematic collection and analysis of data to describe existing conditions, practices, and relationships without manipulating variables (Best & Khan, 2008). Unlike experimental methods, the descriptive approach emphasizes naturally occurring phenomena, making it suitable for comparing and contrasting groups and identifying relationships between non-manipulated variables (Kothari, 2004).

In this study, the descriptive survey method enables the researchers to assess the socio-economic challenges of handloom weavers, examine factors influencing workplace wellness, and generate meaningful interpretations that reflect the real-life situations of the

population under investigation. The investigators had selected Tirunelveli district for their study.

### **3.6. Research Tools for the Study**

The following tools were used for data collection in the present study: Economic Hardships and Workplace Wellness. The investigators provide details regarding the preparation of these tools in the following sections.

Tool 1: Questionnaire on Economic Hardships

Tool 2: Questionnaire on Workplace Wellness

### **3.7. Description of the Tool**

The personal data form is used to collect general information about the handloom weavers. It includes some personal information about the respondents, such as gender, type of family, nature of housing, membership in an association, availed bank loan, use of technology, marital status, educational qualification, type of employment, working hours, and years of experience.

The personal data form is used to collect general information about the college students. It includes some personal information about the respondents, such as gender, type of family, nature of housing, membership in the association, availed bank loan, use of technology, marital status, educational qualification, type of employment, working hours, and years of experience

### **3.8. Economic Hardships Scale**

The investigators employed a self-made questionnaire, the

Economic Hardships Scale (EHS), developed by Vasanthi Medona, L., Michael Jeya Priya, E., Esther Maragathamani, G., and Jebasheela Jenifer, S. (2025), was used to collect data for this study. The scale is designed to measure the level of economic hardships experienced by handloom weavers. It consists of 35 statements, including both positive and negative items, to comprehensively capture the construct.

***Table.3.2. Nature of Items of Economic Hardships Scale***

<b>ITEMS</b>	<b>ITEM NUMBERS</b>	<b>NO. OF ITEMS</b>
Positive	14,15,26,24,32	5
Negative	1,2,3,4,5,6,7,8,9,10,11,12,13,16,17,18,19,20,21,22,23,25,26,27,28,29,30,31	29

### **3.9. Workplace Wellness Scale**

The investigators have used a Self-made Questionnaire of the Workplace Wellness Scale (WWS) developed by Vasanthi Medona, L., Michael Jeya Priya, E., Esther Maragathamani, G., and Jebasheela Jenifer, S. (2025), to collect data for this study. The scale is intended to measure the Workplace Wellness experienced by handloom weavers. It consists of 44 Statements, both positive and negative.

**Table.3.3. Nature of items of Workplace Wellness Scale**

ITEMS	ITEM NUMBERS	NO. OF ITEMS
Positive	1,7,14,15	4
Negative	2,3,4,5,6,8,9,10,11,12,13,16,17,18,19,20,21,22,23,24,25,26	22

### 3.10. Scoring Key

In the scoring key, a *score* refers to the numerical value assigned by the investigators to quantitatively describe a respondent's performance on a given test. These scores are systematically allocated to all responses to ensure objectivity in measurement and to facilitate the conversion of qualitative responses into quantifiable data for analysis. All the statements would be scored for the Economic Hardships Scale (EHS) and Workplace Wellness Scale (WWS) in the following manner for the positive and negative questions.

**Table.3.4. Scoring Key for Economic Hardships**

RESPONSE	CHOICE	
	Positive	Negative
Agree	1	3
Neutral	2	2
Disagree	3	1

**Table.3.4.Scoring Key for Workplace Wellness**

RESPONSE	CHOICE	
	Positive	Negative
Agree	1	3
Neutral	2	2
Disagree	3	1

### 3.11.Trying Out

- The main task of a tryout is to improve and modify the language ambiguity and difficulty. The subjects are selected from the population for which the test is designed. To identify the difficult items and to delete the ambiguous or difficult statements.
- To estimate the reliability index of the tool.
- It enables the investigators to select the required number of items for inclusion in the final form of the scale final tools are prepared.

### 3.12.Pilot study

The pilot study is a preliminary try-out of the instrument with a small number of individuals. The purpose of the pilot study is to refine the instrument, including the correlation of deficiencies. A pilot study is not the major data collection of the study. Before finalizing, the rough draft of the Economic Hardships Scale (EHS) consisted of 35 statements, and 44 for the Workplace Wellness Scale (WWS). The questionnaire was distributed to 30 handloom weavers to know whether the items included in

the questionnaire measure what they have to measure, viz. On the basis of their responses, Scoring was done, and Item vs. Item whole correlation was calculated. Ambiguous items were deleted. Only items having high-level precision were retained.

### 3.13.Item whole correlation

Karl Pearson’s product–moment correlation was used to establish item validity by correlating each item score with the total scale mean score. For the *Economic Hardships* scale, items with correlations  $\geq 0.82$  at the 5% level were retained, while three items below 0.195 were deleted, resulting in 32 items. For the *Workplace Wellness* scale, items with correlations  $\geq 0.79$  were accepted, while five items below 0.195 were removed, yielding a final set of 39 items. Thus, the validity of both tools was confirmed. The validity indices are given in the following.

**Table 3.5. Item Vs Whole Correlation of Economic Hardships of Handloom Weavers**

Item No.	$\gamma$ value	Remarks	Item No.	$\gamma$ value	Remarks
1.	0.414	Selected	19.	0.202	Selected
2.	0.205	Selected	20.	0.242	Selected
3.	0.187	Selected	<b>*21.</b>	<b>0.099</b>	<b>Deleted</b>
4.	0.195	Selected	22.	0.356	Selected
5.	0.334	Selected	23.	0.379	Selected
6.	0.202	Selected	24.	0.276	Selected

7.	0.261	Selected	25.	0.346	Selected
8.	0.195	Selected	26.	0.342	Selected
9.	0.221	Selected	27.	0.297	Selected
10.	0.211	Selected	28.	0.427	Selected
11.	0.302	Selected	29.	0.386	Selected
12.	0.414	Selected	30.	0.414	Selected
<b>*13.</b>	<b>0.075</b>	<b>Deleted</b>	31.	0.205	Selected
14.	0.441	Selected	32.	0.187	Selected
15.	0.371	Selected	33.	0.195	Selected
<b>*16.</b>	<b>0.073</b>	<b>Deleted</b>	34.	0.243	Selected
17.	0.264	Selected	35.	0.210	Selected
18.	0.239	Selected			

*At 5% level of significance, for 98 df, the table value of  $\gamma$  value is 0.823*

*Table 3.6. Item Vs Whole Correlation of Workplace Wellness of Handloom Weavers*

Item No.	$\gamma$ value	Remarks	Item No.	$\gamma$ value	Remarks
1.	0.311	Selected	23.	0.321	Selected
2.	0.323	Selected	24.	0.233	Selected
3.	0.396	Selected	25.	0.197	Selected
4.	0.271	Selected	26.	0.196	Selected
5.	0.311	Selected	<b>*27.</b>	<b>0.120</b>	<b>Deleted</b>
<b>*6.</b>	<b>0.110</b>	<b>Deleted</b>	28.	0.301	Selected
7.	0.396	Selected	29.	0.271	Selected
8.	0.202	Selected	30.	0.296	Selected

9.	0.261	Selected	31.	0.210	Selected
<b>*10.</b>	<b>0.115</b>	<b>Deleted</b>	32.	0.342	Selected
11.	0.221	Selected	33.	0.297	Selected
12.	0.197	Selected	34.	0.427	Selected
13.	0.198	Selected	35.	0.386	Selected
14.	0.308	Selected	36.	0.414	Selected
15.	0.382	Selected	37.	0.205	Selected
<b>*16.</b>	<b>0.121</b>	<b>Deleted</b>	38.	0.261	Selected
17.	0.217	Selected	39.	0.195	Selected
18.	0.227	Selected	40.	0.221	Selected
<b>*19.</b>	<b>0.021</b>	<b>Deleted</b>	41.	0.211	Selected
20.	0.274	Selected	42.	0.302	Selected
21.	0.318	Selected	43.	0.356	Selected
22.	0.248	Selected	44.	0.379	Selected

*At 5% level of significance, for 98 df, the table value of  $\gamma$  value is 0.79*

### **3.14. Establishing Reliability**

According to Lee Cronbach, “validity is the extent to which a test measures what it purports to measure”. Before the administration of the tool, the investigators were asked to bring forth the expert’s judgement regarding the suitability, adequacy, objectivity, and clarity of the pooled items. The newly constructed tool was given to experts, in the field of education for the establishment of “Face Validity”, which is a subjective statement that the tool appears to cover the relevant

content, and “content validity”, which involves the systematic examination of the content to determine whether it covers a representative sample of the domain to be measured. The expert’s opinion on the clarity and suitability in measuring the particular dimension. The arrangements of items in random order were subjected to the expert’s scrutiny. Some items were modified, deleted, and rearranged based on their suggestions. Thus, the face validity and content validity of the tool were established. Thus, 32 statements were retained in the Economic Hardships Scale (EHS), and 26 statements were retained in the Workplace Wellness Scale (WWS).

Reliability refers to the extent to which a research instrument yields consistent and stable results across repeated applications within a specific population. In the present study, the investigators adopted the split-half method to establish the reliability of the tool. This method is widely recognized for evaluating both stability and equivalence, which are critical components of measurement consistency. To apply this method, the entire scale was divided into two halves, comprising odd-numbered and even-numbered items. Each half was scored independently, and the correlation coefficient between the two sets of scores was calculated. This process assesses the coefficient of homogeneity, which reflects how uniformly the items measure a single underlying construct. Following this, the reliability index

for the full-length scale was estimated using the Spearman Brown prophecy formula, which adjusts the split-half correlation to predict the reliability of the complete instrument.

The investigators searched for tools to measure the economic hardships and workplace wellness of handloom weavers. They found some existing tools, but these required advanced knowledge and skills to use effectively. As a result, the investigators developed a separate tool. In the process, they reviewed various books, journals, and articles. The tools were developed by the investigators and the tool. The reliability was found using the test-retest method. The investigators collected the data required for the questionnaire from 30 samples from the Tirunelveli district. Then, after two weeks, the same set of questions was administered to the same sample, and the coefficient of reliability was found as a whole. The computed reliability coefficients were:

***Table.3.7. Split-Half Reliability Value of the Tool***

<b>S.No.</b>	<b>Tool</b>	<b>Split-half ‘<math>\gamma</math>’value</b>
<b>1.</b>	<b>Economic Hardships</b>	<b>0.82</b>
<b>2.</b>	<b>Workplace Wellness</b>	<b>0.79</b>

These values indicate a high degree of internal consistency for both scales, confirming their suitability

for measuring the intended constructs in the target population.

### **3.15. Population**

“Population is defined as a group of individuals that have one or more characteristics that are of common interest to the researchers”. The researchers have confined the population of the present study only to handloom weavers in Tirunelveli District.

### **3.16. Sample and Sampling Design**

According to John, a sample, as the name implies, is a smaller representation of a larger whole. W. Best (2008) “A sample is a small proportion of the population that is selected for observation and analysis. By observing the characteristics of the sample, certain inferences can be made about the characteristics of the population from which it is drawn.

The investigators have derived the sample for the present study from 147 handloom weaver workers in Tirunelveli District. The most basic form of probability sampling is the simple Random Sampling technique. With the simple random sample, each unit in the population has an equal probability of inclusion in the sample. Gay (1987) reports: “Random sampling is the best single way to obtain a representative sample. The investigators have used the Simple Random Sampling Technique for this study.

### **3.17. Administration of the Tool**

The investigators personally visited the areas of Veeravanallur, Velanguli, Puthukudiruppu, and Mormadam to collect primary data from the handloom weavers. A personal data form, along with the Economic Hardships Scale (EHS) and the Workplace Wellness Scale (WWS), was administered to the participants. Adequate time was provided for the weavers to carefully read and respond to each item in the instruments, ensuring accuracy and reliability of the responses.

### **3.18. Research Tool Used for the Present Study**

Considering the various objectives and purposes of the study, the investigators developed the following tools.

1. Personal data sheet prepared by the investigators.
2. Economic Hardships Scale (EHS)
3. Workplace Wellness Scale (WWS) prepared by the investigators.

### **3.19. Description of the Tool**

The investigators collected data from 147 handloom weavers in Tirunelveli District. The following demographic variables were selected for the present investigation.

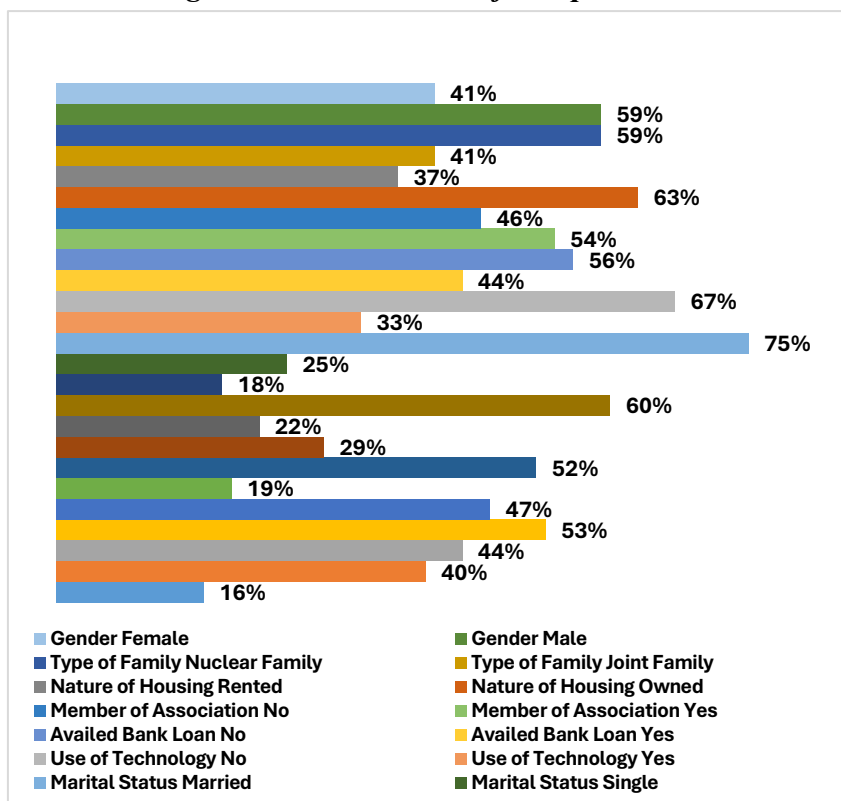
Gender	: Male / Female
Type of Family	: Joint Family / Nuclear Family
Nature of Housing	: Owned / Rented
Membership in the Association	: Yes / No
Availed Bank loan	: Yes / No
Use of Technology	: Yes / No
Marital Status	: Unmarried / Married
Educational Qualification	: Uneducated / School Level / College Level
Type of Employment	: Permanent / Temporary / Contractual
Working hours	: 0-5 hours / 5–10 hours / Above 10 hours
Years of Experience	: 0-5 Years / 5-10 Years / 10 Years and Above

**Table.3.8. Distribution of the Sample**

S.No.	Variables	Category	Sample (n)	Percentage (%)
1.	Gender	Male	87	59%
		Female	60	41%
2.	Type of Family	Joint Family	61	41%
		Nuclear Family	86	59%
3.	Nature of Housing	Owned	92	63%
		Rented	55	37%
4.	Member of the Association	Yes	79	54%
		No	68	46%
5.	Availed Bank Loan	Yes	64	44%
		No	83	56%
6.	Use of Technology	Yes	49	33%
		No	98	67%
7.	Marital Status	Single	37	25%
		Married	110	75%
8.	Educational Qualification	Uneducated	32	22%
		School Level	88	60%
		College Level	27	18%
9.	Type of Employment	Permanent	28	19%
		Temporary	76	52%
		Contractual	43	29%
10.	Working Hours	0-5 hours	78	53%
		5-10 hours	69	47%

S.No.	Variables	Category	Sample (n)	Percentage (%)
11.	Years of Experience	Above 10 hours	24	16%
		0–5 Years	24	16%
		5–10 Years	59	40%
		10 Years and Above	64	44%

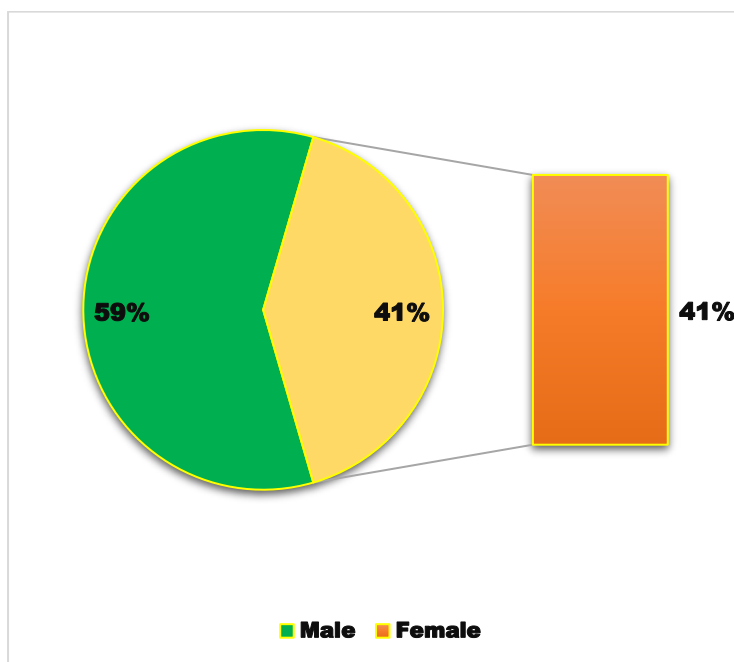
**Figure 3.2. Distribution of Sample**



**Table.3.9. Distribution of Samples with Regard to Gender**

<b>Gender</b>	<b>No. of Workers</b>	<b>Percentage</b>
Male	87	59
Female	60	41
<b>Total</b>	<b>147</b>	<b>100</b>

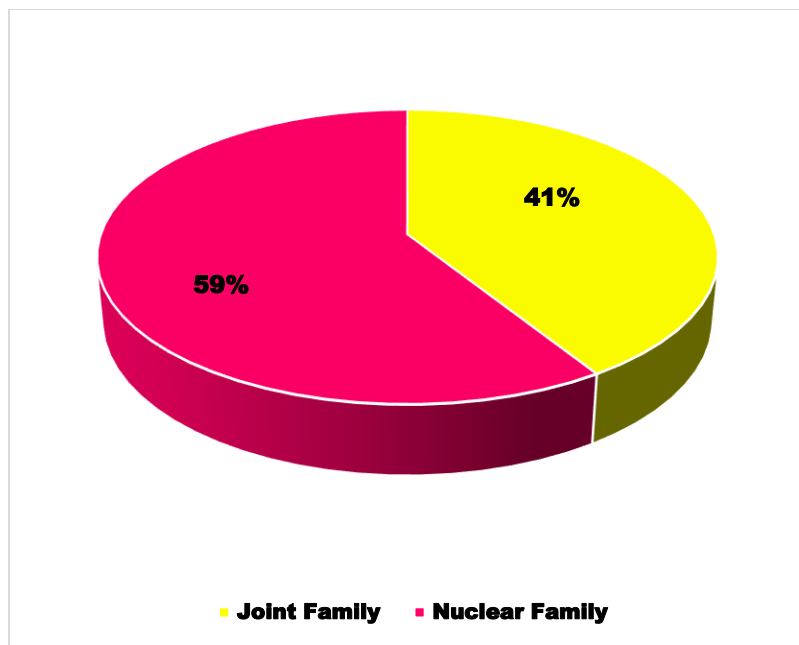
**Figure 3.3. Distribution of Samples with Regard to Gender**



**Table.3.10. Distribution of Sample with Regard to Type of Family**

Type of Family	No. of Workers	Percentage
Joint Family	61	41
Nuclear Family	86	59
<b>Total</b>	<b>147</b>	<b>100</b>

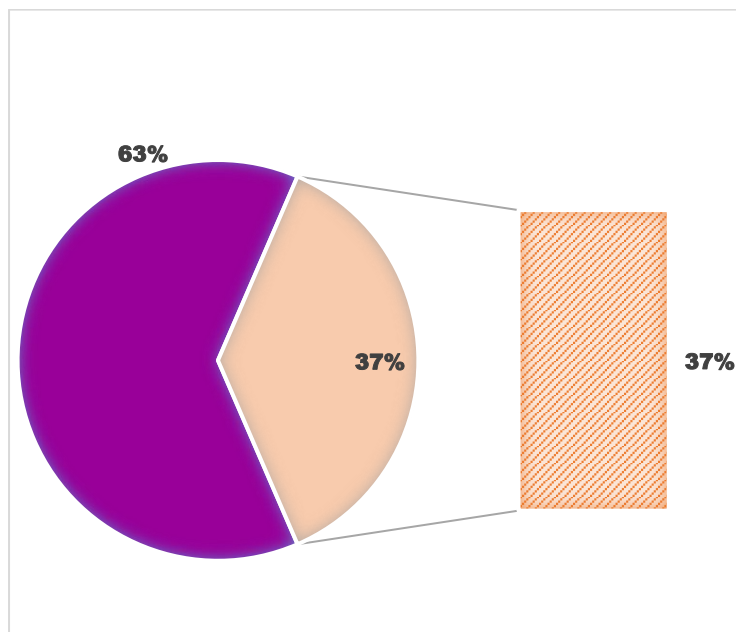
**Figure 3.4. Distribution of Sample with Regard to Type of Family**



**Table.3.11.Distribution of Sample with Regard to Nature of Housing**

<b>Nature of Housing</b>	<b>No. of Workers</b>	<b>Percentage</b>
Owned	92	63%
Rented	55	37%
<b>Total</b>	<b>147</b>	<b>100</b>

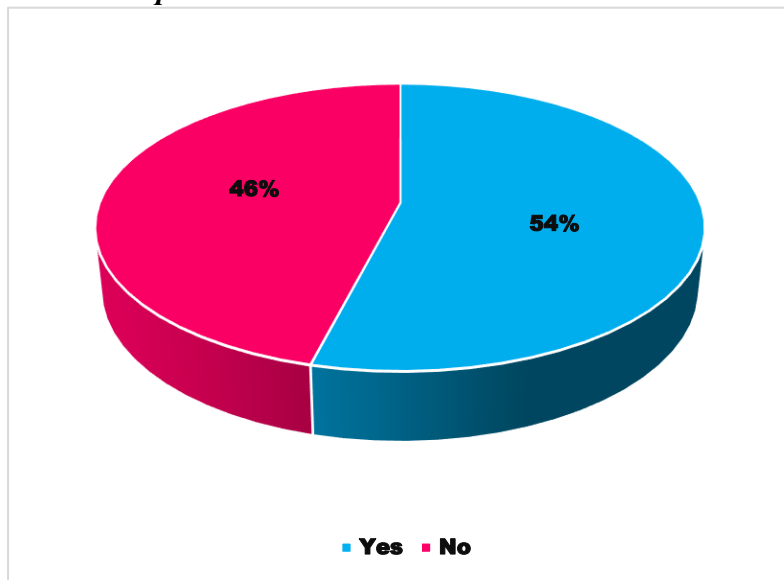
**Figure 3.5.Distribution of Sample with Regard to Nature of Housing**



***Table.3.12. Distribution of Sample with Regard to Membership in an Association***

<b>Membership in an Association</b>	<b>in No. of Workers</b>	<b>Percentage</b>
Yes	79	54%
No	68	46%
<b>Total</b>	<b>147</b>	<b>100</b>

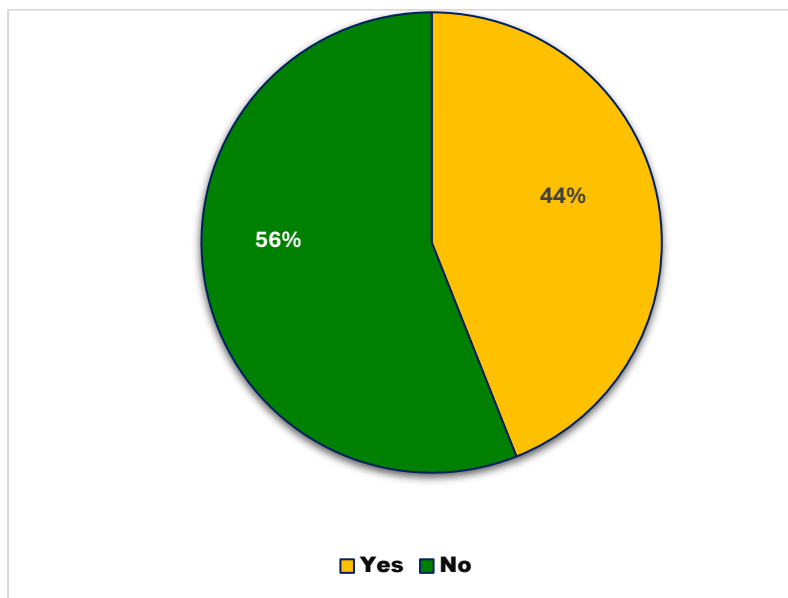
***Figure 3.6. Distribution of Sample with Regard to Membership in an Association***



**Table.3.13. Distribution of Sample with Regard to Availing Bank Loan**

Availing Loan	Bank No. of Workers	Percentage
Yes	64	44%
No	83	56%
<b>Total</b>	<b>147</b>	<b>100</b>

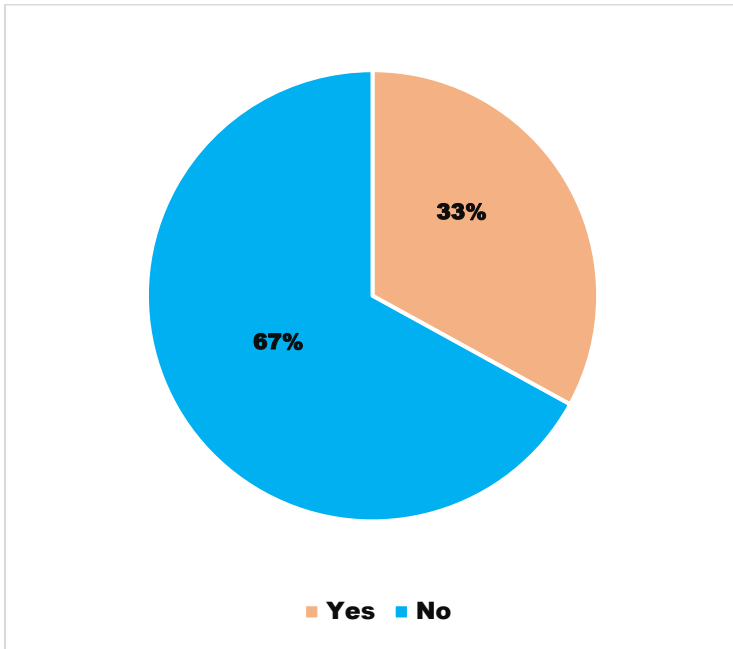
**Figure 3.7. Distribution of Sample with Regard to Availing Bank Loan**



**Table.3.14. Distribution of Sample with Regard to Use of Technology**

Use of Technology	No. of Workers	Percentage
Yes	49	33%
No	98	67%
<b>Total</b>	<b>147</b>	<b>100</b>

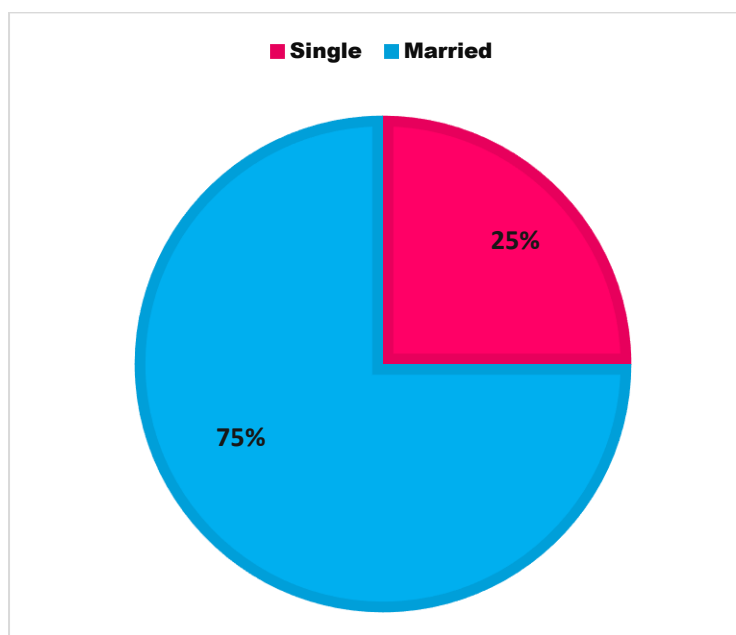
**Figure 3.8. Distribution of Sample with Regard to Use of Technology**



**Table.3.15. Distribution of Sample with Regard to Marital Status**

<b>Marital Status</b>	<b>No. of Workers</b>	<b>Percentage</b>
Single	37	25%
Married	110	75%
<b>Total</b>	<b>147</b>	<b>100</b>

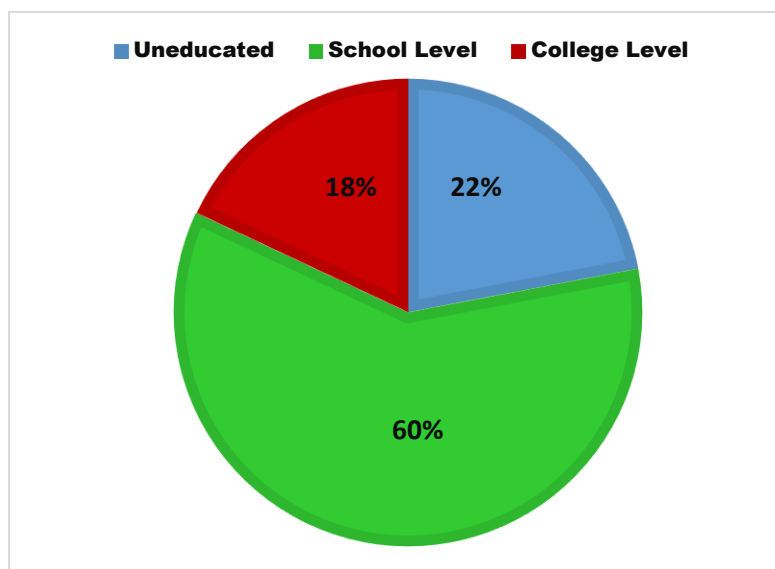
**Figure 3.9. Distribution of Sample with Regard to Marital Status**



**Table.3.16. Distribution of Sample with Regard to Educational Qualification**

<b>Educational Qualification</b>	<b>No. of Workers</b>	<b>Percentage</b>
Uneducated	32	22%
School Level	88	60%
College Level	27	18%
<b>Total</b>	<b>147</b>	<b>100</b>

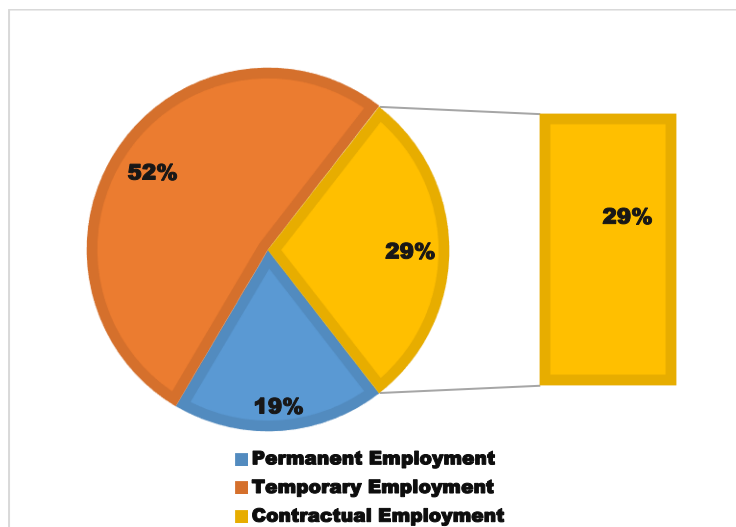
**Figure 3.10. Distribution of Sample with Regard to Educational Qualification**



**Table.3.17. Distribution of Sample with Regard to Type of Employment**

Type of Employment	No. of Workers	Percentage
Permanent Employment	28	19%
Temporary Employment	76	52%
Contractual Employment	43	29%
<b>Total</b>	<b>147</b>	<b>100</b>

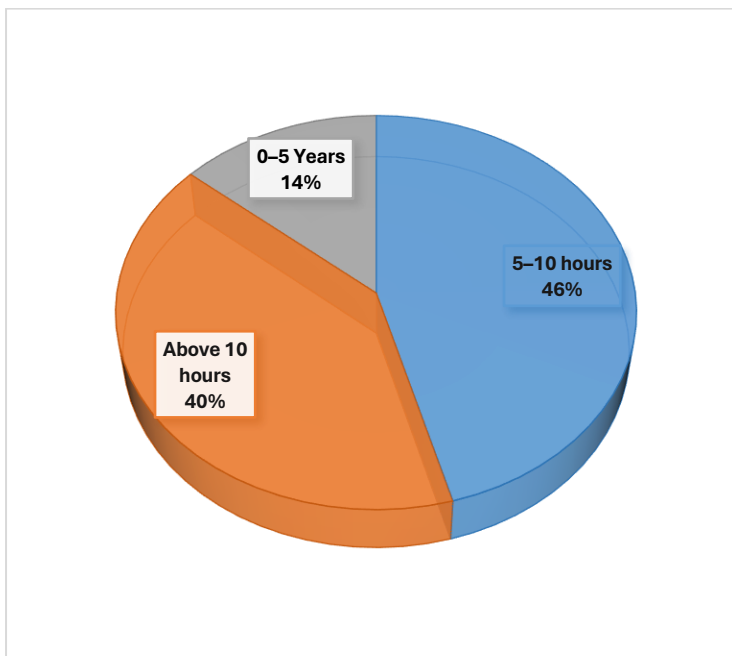
**Figure 3.11. Distribution of Sample with Regard to Type of Employment**



**Table.3.18. Distribution of Sample with Regard to Working Hours**

<b>Working Hours</b>	<b>No. of Workers</b>	<b>Percentage</b>
5–10 hours	78	53%
Above 10 hours	69	47%
0–5 Years	24	16%
<b>Total</b>	<b>147</b>	<b>100</b>

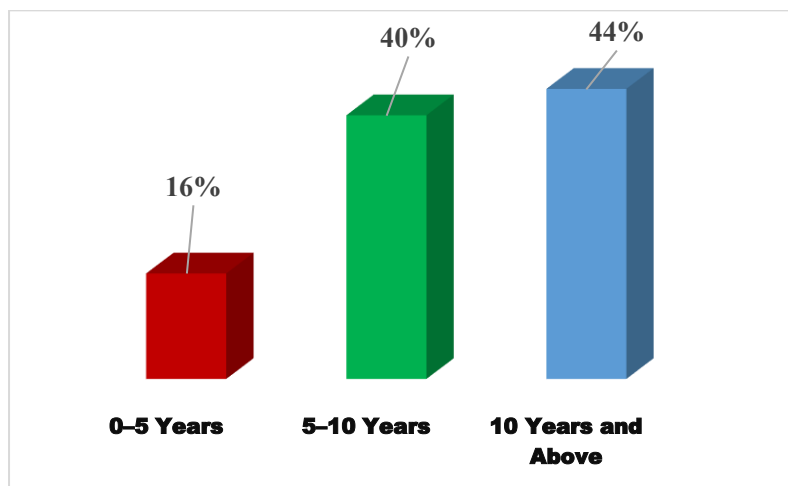
**Figure 3.12. Distribution of Sample with Regard to Working Hours**



**Table.3.19. Distribution of Sample with Regard to Years of Experience**

Type of Employment	No. of Workers	Percentage
0–5 Years	24	16%
5–10 Years	59	40%
10 Years and Above	64	44%
<b>Total</b>	<b>147</b>	<b>100</b>

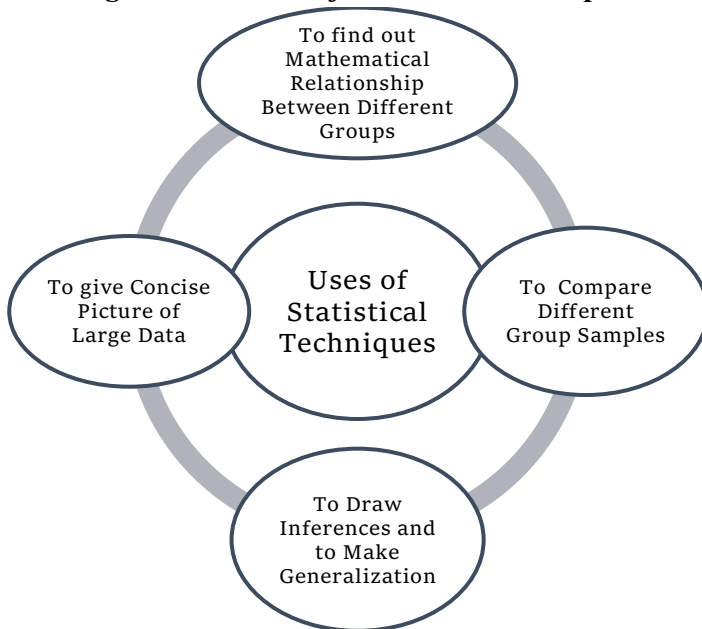
**Figure 3.13. Distribution of Sample with Regard to Years of Experience**



### 3.20.Role of Statistics in Educational Research

The role of statistics in educational research is to serve as a scientific tool for designing studies, analyzing data, and drawing meaningful conclusions. It provides a systematic basis for organizing large volumes of educational data into manageable and interpretable forms, thereby ensuring accuracy, clarity, and objectivity in the research process. In the present study, the researcher adopted both descriptive and inferential statistical measures to systematically analyze the data and derive valid interpretations relevant to the field of education.

*Figure 3.14. Uses of Statistical Techniques*



The uses of statistical techniques in educational research are multi-dimensional. They help to:

- ❖ Find out mathematical relationships between different groups by identifying associations, correlations, or trends among students, teachers, or institutions.
- ❖ Compare different group samples – to test hypotheses and examine whether differences between groups (e.g., gender, institution type, instructional methods) are significant.
- ❖ Draw inferences and make generalizations – by extending results from the sample of students, teachers, or schools to the larger educational population with statistical confidence.
- ❖ Give a concise picture of large data by simplifying complex educational information through measures like mean, standard deviation, and correlation values.

Thus, statistics in educational research not only aid in summarizing and presenting data but also play a vital role in validating hypotheses, testing educational interventions, identifying patterns of learning and teaching, and ensuring the reliability and generalizability of findings across contexts.

### **3.21. Statistical Techniques Used for Data Analysis**

The data were analyzed using basic statistical measures of central tendency and the relationship between variables.

In the present study following statistical techniques have been used.

1. Descriptive Analysis (Mean and Standard Deviation)
2. Differential Analysis (t-value and F-ratio)
3. Correlation Analysis (r-value)

### **3.22. Conclusion**

This chapter provides an overview of the proposed research methodology of the study. An attempt has been made to explain the need and significance of the study, objectives and hypotheses of the study, the statement of the problem, operational definitions of key terms, research design, and variables of the study, the methodology of the study, research tools used for data collection, population and sample, and statistical techniques employed for analysis of the data.

## **CHAPTER IV – ANALYSIS OF DATA**

### **4.0.Introduction**

The analysis and interpretation of data form the most crucial stage of any research study. Once the data have been collected, they must be processed and analyzed in accordance with the framework established in the research plan. Proper analysis ensures that the information gathered is not only systematically examined but also utilized to make meaningful comparisons and valid inferences. As C. V. Good rightly observed, “technically speaking, processing includes editing, coding, classification, and tabulation of collected data so that they are amenable to the analysis.” Thus, analysis refers to the computation of appropriate measures and the identification of patterns or relationships that exist among groups of data. In this process, relationships or differences, whether they support or contradict the hypotheses, must be subjected to statistical tests of significance to determine the validity of the conclusions.

Although the data collected may be adequate, valid, and reliable, they do not serve any meaningful purpose unless they are carefully edited, scientifically analyzed, intelligently interpreted, systematically classified, and logically summarized. As Martz has correctly pointed out, “bare facts, objectives and data never determine anything. They become significant only when interpreted in the light of accepted standards and

assumptions, and these standards, in the final analysis, are not susceptible to scientific determination. In ordinary life, we seldom deal with bare facts but deal with facts that are interpreted. This interpretation or evaluation is determined by the purpose to which we relate the facts.” In reality, raw data remain merely a collection of figures and observations until they are subjected to systematic analysis and interpretation. It is only through this process that they acquire meaning, relevance, and direction. As Best has stated, “analysis of data relates to studying the tabulated material to determine the inherent factors or meanings. It includes breaking down existing complex factors into simple parts and putting the parts together in a new arrangement for the raw information collected.”

Hence, the present chapter has been devoted to the analysis and interpretation of the data collected for the study. The results have been presented in a systematic manner through tables, figures, and statistical tests, followed by interpretations that relate directly to the objectives and hypotheses of the research. The present chapter occupies a central place in the research report, for it moves beyond the statistical presentation of results to an in-depth interpretation of the economic hardships and workplace wellness of handloom weavers, thereby linking the empirical data with the theoretical framework, research objectives, and hypotheses of the study. While the previous chapter provided the numerical evidence through tables, figures, frequencies, percentages, and tests

of significance, the true value of research lies not merely in presenting figures but in engaging with those figures critically to reveal their meaning, their implications, and their relevance to broader issues in society and scholarship. In this regard, the present chapter attempts to weave together the quantitative outcomes and the qualitative insights into a coherent narrative that reflects the lived realities of handloom weavers.

The economic hardships of weavers have emerged from the data as a multifaceted phenomenon shaped by gender, family structure, residence, housing conditions, access to credit, membership in associations, type of employment, working hours, years of experience, and the adoption or non-adoption of technology. At the same time, workplace wellness is closely connected to these economic struggles, for without financial stability and adequate resources, wellness at work becomes difficult to achieve. Thus, this chapter seeks to provide a thoughtful discussion that situates the results within the context of previous studies on labour economics, occupational health, and cultural sustainability, while also offering insights that are unique to the present investigation.

The chapter further emphasizes that economic hardships are not an isolated phenomenon but one that has direct implications for workplace wellness. Stress, fatigue, and health risks are intensified when financial instability persists, and wellness initiatives cannot succeed in the absence of basic livelihood security. The

data presented in the previous chapter, when carefully interpreted here, reveal that low wages, irregular employment, and lack of institutional support erode the physical and psychological well-being of weavers, thereby reducing productivity and job satisfaction. The findings resonate with the theoretical perspectives of labour welfare and occupational well-being, which argue that economic and health dimensions are inseparable in any discussion of workforce sustainability. Moreover, the role of external support systems, such as weavers' associations, government schemes, and cooperative societies, is highlighted in this chapter as being crucial to reducing hardship and enhancing wellness. The data indicated that members of associations faced comparatively less hardship than non-members, suggesting the protective role of collective organization in an otherwise fragmented industry.

By engaging with these patterns, this chapter not only validates some of the established findings in existing literature but also brings out new insights that enrich the discourse on handloom weaving. The contradictions observed in the relationship between technology and hardship, as well as between working hours and income, indicate that there are hidden structural challenges that simple quantitative measures cannot fully explain, necessitating further qualitative exploration in future studies. This discussion is therefore not confined to confirming or rejecting hypotheses, but also aims to

interpret the nuances of the data in a manner that is meaningful to policymakers, academicians, social activists, and the weaving community itself. From an academic standpoint, the present chapter situates the findings within the broader fields of economics, sociology, and occupational health, contributing to the interdisciplinary understanding of artisanal labour. From a practical standpoint, the interpretations offered here pave the way for concrete suggestions that address both economic hardships and workplace wellness in an integrated manner.

Therefore, the researcher has given much importance to this part. This chapter analyses the collected data at four levels: descriptive, differential, and correlation. The data were collected from a sample of 147 handloom weavers in Tirunelveli District who have been subjected to

1. Descriptive Analysis (Percentage, Mean, and Standard Deviation)
2. Differential Analysis (t-value and F-ratio)
3. Correlation Analysis (r-value)

### ***Description Analysis***

Descriptive Analysis includes a comparison of measures of central tendency, such as the mean, and measures of variability, such as standard deviation. The calculated values describe the properties of the different sub-samples. Percentage analysis is one of the statistical

analysis techniques used to describe the characteristics of the sample or population in totality. Percentage analysis involves computing measures of variables selected for the study, and its findings will give easy interpretation for the reader.

### ***Differential Analysis***

Differential Analysis determines the statistical significance of the difference between groups concerning select variables. It is a numerical procedure that considers the difference between the means of the two subgroups, the size of the sample in each group, and the amount of variation or spread present in the scores. Thus, the t-test is a technique to determine whether or not the two groups are significantly. ANOVA is employed to determine whether there are substantial differences among the means of more than two groups of variables. The ANOVA yields the F-value, determining whether significant differences exist between the means of the different groups. The hypotheses are tested at 0.05 and 0.01 levels.

### ***Correlation Analysis***

Correlation Analysis is the relationship between two or more variables or two or more sets of data. The degree of relationship is measured and represented by the coefficient of correlation. The relationship between the two samples is found using the correlation method. There are several indices of relationship. In this study, the product-moment correlation coefficient method is used.

Pearson's product-moment correlation coefficient was calculated in this study to show the relationship between overall occupational hazards and the socio-economic well-being of women domestic workers.

#### **4.1. Need for Analysis of Data**

An important aspect of data analysis is that the purpose of the presentation of data is to highlight the result and make the data or results more illustrative. The visual presentation of data or results is simple and easy to understand. The graphical and pictorial presentations provide the geometrical image of data, enabling one to comprehend the essentials of the frequency distribution and helping to observe the assumptions of the statistical analysis applied to the treatment of data.

#### **4.2. Interpretation**

The analysis and interpretation of data represent the application of deductive and inductive logic to the research process. The data are often classified by division into subgroups and then analyzed and synthesized so that hypotheses may be verified or rejected. The final result may be a new principle or generalization. Data are examined in terms of comparison between the more homogeneous segments within the group and by comparison with some outside criterion. Barr and Others state, "Analysis is an important phase of the classification and summation of data into a summary". The types of statistical analysis of the data obtained in research are

limited to the nature of the data or the measurement scale one obtains by quantification. Non-parametric or parametric methods may analyze Data measured by the equal interval or the ratio scale.

The analysis and interpretation of data represent the application of deductive and inductive logic to the research process. The data are often classified by division into subgroups and then analyzed and synthesized so that hypotheses may be verified or rejected. The final result may be new principles or generalizations. Data are examined in terms of comparison between more homogeneous segments within the group and in comparison, with some outside criticism.

The analysis of data serves the following main functions:

1. To make the raw data meaningful
2. To test null hypotheses
3. To obtain significant results
4. To draw some inferences or make generalizations
5. To evaluate parameters

### **4.3. Objective Testing**

#### **Null Hypothesis 1**

The level of economic hardships among handloom weavers is moderate.

**Table 4.1. Level of Economic hardships among handloom weavers**

Variables	Low		Average		High	
	N	%	N	%	N	%
<b>Gender</b>						
Male	30	34.5	28	32.2	29	33.3
Female	20	33.3	20	33.3	20	33.3
<b>Type of Family</b>						
Joint Family	20	32.8	20	32.8	21	34.4
Nuclear Family	29	33.7	29	33.7	28	32.6
<b>Nature of Housing</b>						
Owned	31	33.7	31	33.7	30	32.6
Rented	18	32.7	19	34.6	18	32.7
<b>Membership in the Handloom Weavers Association</b>						
Yes	26	32.9	26	32.9	27	34.2
No	23	33.8	23	33.8	22	32.4
<b>Availed a Bank Loan</b>						
Yes	21	32.8	21	32.8	22	34.4
No	28	33.7	28	33.7	27	32.5

<b>Variables</b>		<b>Low</b>		<b>Average</b>		<b>High</b>
<b>Use of Technology</b>						
Yes	16	32.7	16	32.7	17	34.6
No	33	33.7	33	33.7	32	32.6
<b>Marital Status</b>						
Unmarried	12	32.4	12	32.4	13	35.2
Married	37	33.6	37	33.6	36	32.8
<b>Educational Qualification</b>						
Uneducated	11	34.4	11	34.4	10	31.2
School Level	29	33.0	30	34.1	29	33.0
College Level	9	33.3	9	33.3	9	33.3
<b>Type of Employment</b>						
Permanent Employment	9	32.1	9	32.1	10	35.8
Temporary Employment	25	32.9	26	34.2	25	32.9
Contractual Employment	14	32.6	14	32.6	15	34.8
<b>Working Hours</b>						
Below 5 Hours	26	33.3	26	33.3	26	33.3
5–10 Hours	23	33.3	23	33.3	23	33.3

<b>Variables</b>	<b>Low</b>		<b>Average</b>		<b>High</b>	
Above 10 Hours	23	33.3	23	33.3	23	33.3
<b>Years of Experience</b>						
0–5 Years	8	33.3	8	33.3	8	33.3
5–10 Years	20	33.9	20	33.9	19	32.2
10 Years and Above	21	32.8	21	32.8	22	34.4

It is inferred from Table 4.1 that, with regard to gender, 34.5% of male handloom weavers reported a low level of economic hardships, 32.2% an average level, and 33.3% a high level. In contrast, 33.3% of female handloom weavers indicated a low level, 33.3% an average level, and 33.3% a high level of economic hardships, suggesting only marginal gender differences.

Considering the type of family, 32.8% of respondents from joint families reported a low level of hardships, 32.8% an average level, and 34.4% a high level. Among nuclear families, 33.7% indicated low and average levels each, while 32.6% experienced high levels of economic hardships.

Regarding the nature of housing, 33.7% of respondents in owned houses reported low levels, 33.7% average, and 32.6% high levels, whereas among those in

rented houses, 32.7% reported low, 34.6% average, and 32.7% high levels of hardships.

With respect to membership in the Handloom Weavers Association, 32.9% of members reported low levels, 32.9% average, and 34.2% high levels of hardships. In comparison, 33.8% of non-members experienced low and average levels each, while 32.4% experienced high levels.

Regarding bank loan availment, 32.8% of respondents who had availed loans reported low and average levels each, while 34.4% reported high levels. Among those who had not availed loans, 33.7% reported low and average levels each, while 32.5% reported high levels of economic hardships.

The use of technology indicated a slightly different pattern. Among technology users, 32.7% reported low levels, 32.7% average, and 34.6% high levels of hardships. On the other hand, non-users reported 33.7% low, 33.7% average, and 32.6% high levels. With respect to marital status, 32.4% of unmarried respondents experienced low and average levels each, and 35.2% reported high levels, whereas married respondents reported 33.6% low and average levels each, and 32.8% high levels. In terms of educational qualification, 34.4% of uneducated respondents reported low and average levels each, while 31.2% reported high levels. Among school-level educated respondents, 33.0% reported low,

34.1% average, and 33.0% high levels. Similarly, 33.3% of college-level respondents reported low, average, and high levels equally.

Regarding employment type, 32.1% of permanent employees reported low and average levels each, while 35.8% reported high levels. Temporary employees reported 32.9% low, 34.2% average, and 32.9% high levels, whereas contractual employees reported 32.6% low, 32.6% average, and 34.8% high levels of hardships. With respect to working hours, respondents working below 5 hours, 5–10 hours, and above 10 hours all indicated equal distributions of economic hardships, with 33.3% reporting low, 33.3% average, and 33.3% high levels across the categories.

Finally, with regard to years of experience, 33.3% of those with 0–5 years reported low, average, and high levels equally. Respondents with 5–10 years of experience reported 33.9% low, 33.9% average, and 32.2% high levels, while those with more than 10 years of experience reported 32.8% low, 32.8% average, and 34.4% high levels of economic hardships.

## **Null Hypothesis 2**

There is no significant difference between male and female handloom weavers in their economic hardships.

**Table 4.2 Difference Between Male and Female Handloom Weavers in Their Economic Hardships**

Gender	N	Mean	SD	t-value	Remarks
Male	87	75.32	10.45	1.82	NS
Female	60	72.15	9.87		

*(At 5% level of significance, the table value of 't' is 1.96)*

It is inferred from Table 4.2 above that the calculated. The t-value 1.82 is lower than the table value 1.96 at the 0.05 level of significance. Hence, the null hypothesis is accepted. Thus, there is no significant difference between male and female handloom weavers in their economic hardships. Male handloom weavers ( $n = 87$ ) obtained a mean score ( $M = 75.32$ ,  $SD = 10.45$ ), whereas female handloom weavers ( $n = 60$ ) obtained a mean score ( $M = 72.15$ ,  $SD = 9.87$ ). The calculated  $t$ -value was 1.82, which is lower than the table value of 1.96 at the 0.05 level of significance. Hence, the difference was not statistically significant, and the null hypothesis was accepted. This indicates that there is no significant difference between male and female handloom weavers in their economic hardships.

### Null Hypothesis 3

There is no significant difference between joint family and nuclear family handloom weavers in their economic hardships.

**Table 4.3. Difference Between Joint Family and Nuclear Family Handloom Weavers in Their Economic Hardships**

Type of Family	N	Mean	SD	t-value	Remarks
Joint family	61	61.78	7.54	1.12	NS
Nuclear family	86	65.32	8.02		

*(At 5% level of significance, the table value of 't' is 1.96)*

It is inferred from the above Table 4.3 that the calculated  $t$  value 1.12 is lower than the table value 1.96 at the 0.05 level of significance. Hence, the null hypothesis is accepted. Thus, there is no significant difference between joint family and nuclear family handloom weavers in their economic hardships. Joint family handloom weavers ( $n = 61$ ) obtained a mean score ( $M = 61.78$ ,  $SD = 7.54$ ), whereas nuclear family handloom weavers ( $n = 86$ ) obtained a mean score ( $M = 65.32$ ,  $SD = 8.02$ ). The calculated  $t$ -value was 1.12, which is lower than the table value of 1.96 at the 0.05 level of significance. Hence, the

difference was not statistically significant, and the null hypothesis was accepted. This indicates that there is no significant difference between joint family and nuclear family handloom weavers in their economic hardships.

#### **Null Hypothesis 4**

There is no significant difference between owned and rented house handloom weavers in their economic hardships.

***Table 4.4. Difference Between Owned and Rented House Handloom Weavers in Their Economic Hardships***

<b>Nature of Housing</b>	<b>N</b>	<b>Mean</b>	<b>SD</b>	<b>t-value</b>	<b>Remarks</b>
<b>Owned</b>	<b>92</b>	<b>61.35</b>	<b>7.92</b>	<b>1.42</b>	<b>NS</b>
<b>Rented</b>	<b>55</b>	<b>66.10</b>	<b>8.04</b>		

*(At 5% level of significance, the table value of 't' is 1.96)*

It is inferred from the above Table 4.4 that the calculated  $t$  value 1.42 is lower than the table value 1.96 at the 0.05 level of significance. Hence, the null hypothesis is accepted.

Thus, there is no significant difference between owned and rented house handloom weavers in their economic hardships. Handloom weavers living in owned

houses ( $n = 92$ ) obtained a mean score ( $M = 61.35$ ,  $SD = 7.92$ ), whereas those living in rented houses ( $n = 55$ ) obtained a mean score ( $M = 66.10$ ,  $SD = 8.04$ ). The calculated  $t$ -value was 1.42, which is lower than the table value of 1.96 at the 0.05 level of significance. Hence, the difference was not statistically significant, and the null hypothesis was accepted. This indicates that there is no significant difference between owned and rented house handloom weavers in their economic hardships.

### **Null Hypothesis 5**

There is no significant difference between handloom weavers with association membership and those without association membership in their economic hardships.

***Table 4.5 Difference Between Handloom Weavers with Association Membership and Those Without Association Membership in Their Economic Hardships.***

<b>Membership in Association</b>	<b>N</b>	<b>Mean</b>	<b>SD</b>	<b>t-value</b>	<b>Remarks</b>
<b>Yes</b>	<b>79</b>	<b>65.78</b>	<b>8.22</b>	<b>3.72</b>	<b>S</b>
<b>No</b>	<b>68</b>	<b>60.82</b>	<b>7.49</b>		

*(At 5% level of significance, the table value of 't' is 1.96)*

It is inferred from the above table that the calculated  $t$  value 3.72 is higher than the table value 1.96 at the 0.05 level of significance. Hence, the null hypothesis is

rejected. Thus, there is a significant difference between handloom weavers with association membership and those without association membership in their economic hardships. Handloom weavers with association membership (n = 79) obtained a mean score (M = 65.78, SD = 8.22), whereas those without association membership (n = 68) obtained a mean score (M = 60.82, SD = 7.49). This indicates that there is a significant difference between handloom weavers with association membership and those without association membership in their economic hardships.

### **Null Hypothesis 6**

There is no significant difference in economic hardships between handloom weavers who have availed bank loans and those who have not availed bank loans.

***Table 4.6 Difference in Economic Hardships Between Handloom Weavers Who Have Availed Bank Loans and Those Who Have Not Availed Bank Loans.***

<b>Bank Loan Availment</b>	<b>N</b>	<b>Mean</b>	<b>SD</b>	<b>t-value</b>	<b>Remarks</b>
<b>Yes</b>	<b>64</b>	<b>66.42</b>	<b>7.88</b>	<b>3.84</b>	<b>S</b>
<b>No</b>	<b>83</b>	<b>61.05</b>	<b>8.11</b>		

*At 5% level of significance the table value of 't' is 1.96)*

It is inferred from the above table that the calculated  $t$  value 3.84 is higher than the table value 1.96 at the 0.05 level of significance. Hence, the null hypothesis is rejected.

Thus, there is a significant difference between handloom weavers who availed bank loans and those who did not avail bank loans in their economic hardships. Handloom weavers who availed bank loans ( $n = 64$ ) obtained a mean score ( $M = 66.42$ ,  $SD = 7.88$ ), whereas those who did not avail bank loans ( $n = 83$ ) obtained a mean score ( $M = 61.05$ ,  $SD = 8.11$ ).

The calculated  $t$ -value was 3.84, which is higher than the table value of 1.96 at the 0.05 level of significance. Hence, the difference was statistically significant, and the null hypothesis was rejected. This indicates that there is a significant difference between handloom weavers who availed bank loans and those who did not in their economic hardships.

### **Null Hypothesis 7**

There is no significant difference in economic hardships between handloom weavers who use technology and those who do not.

**Table 4.7 Difference in Economic Hardships Between Handloom Weavers Who Use Technology and Those Who Do Not.**

Use of Technology	N	Mean	SD	t-value	Remarks
Yes	49	61.28	7.65	4.16	S
No	98	66.93	8.09		

*(At 5% level of significance the table value of 't' is 1.96)*

It is inferred from the above table that the calculated  $t$  value 3.84 is higher than the table value 1.96 at the 0.05 level of significance. Hence, the null hypothesis is rejected. Thus, there is a significant difference between handloom weavers who use technology and those who do not use technology in their economic hardships. Handloom weavers who use technology obtained a higher mean score, whereas those who do not use technology obtained a comparatively lower mean score, indicating variation in their level of economic hardships. The calculated  $t$ -value was 3.84, which is higher than the table value of 1.96 at the 0.05 level of significance. Hence, the difference was statistically significant, and the null hypothesis was rejected. This indicates that there is a significant difference in economic hardships between handloom weavers who use technology and those who do not.

### Null Hypothesis 8

There is no significant difference between unmarried and married handloom weavers in their economic hardships.

**Table 4.8 Difference Between Unmarried and Married Handloom Weavers in Their Economic Hardships.**

Marital Status	N	Mean	SD	t-value	Remarks
Unmarried	37	60.74	7.31	1.24	NS
Married	110	65.89	8.25		

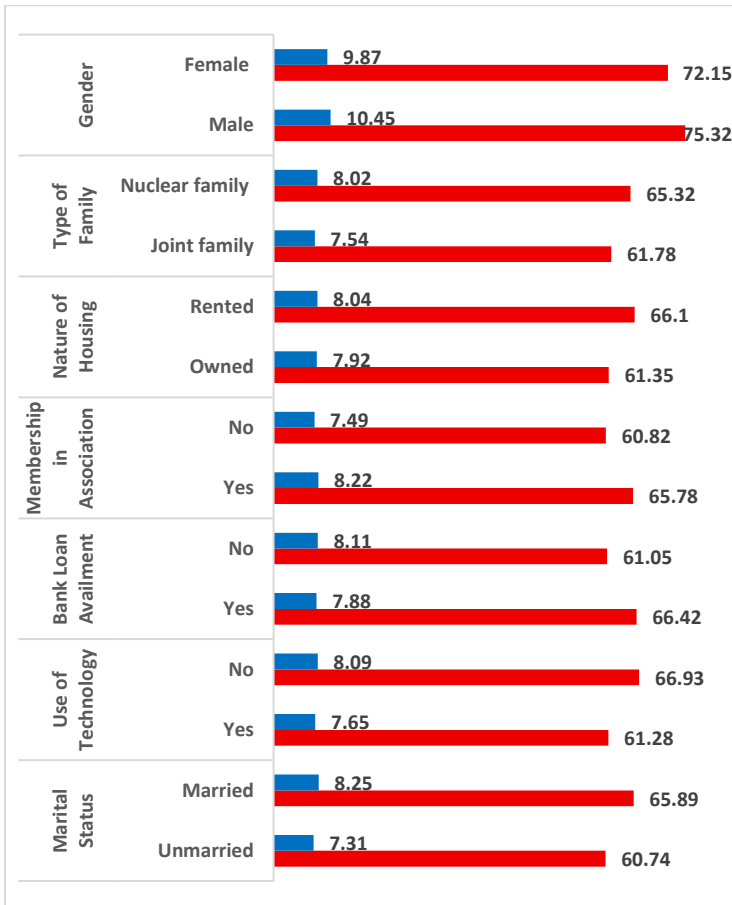
*(At 5% level of significance, the table value of 't' is 1.96)*

It is inferred from the above Table 4.8 that the calculated  $t$  value 1.24 is lower than the table value 1.96 at the 0.05 level of significance. Hence, the null hypothesis is accepted.

Thus, there is no significant difference between unmarried and married handloom weavers in their economic hardships. Unmarried handloom weavers ( $n = 37$ ) obtained a mean score ( $M = 60.74$ ,  $SD = 7.31$ ), whereas married handloom weavers ( $n = 110$ ) obtained a mean score ( $M = 65.89$ ,  $SD = 8.25$ ). The calculated  $t$ -value was 1.24, which is lower than the table value of 1.96 at the 0.05 level of significance. Hence, the difference was not statistically significant, and the null hypothesis was accepted. This indicates that there is no significant

difference between unmarried and married handloom weavers in their economic hardships.

**Figure.4.2. The Graphical Representation Shows the Mean Score and Standard Deviation of Economic Hardships of Handloom Weavers in Tirunelveli District**



### **Null Hypothesis 9**

There is no significant association between educational qualification and economic hardships of handloom weavers.

**Table 4.9 Association Between Educational Qualification and Economic Hardships of Handloom Weavers.**

<b>Category</b>	<b>Mean</b>	<b>df</b>	<b>Calculated <math>\chi^2</math> Value</b>	<b>p-value</b>	<b>Remarks</b>
	68.40				
<b>Educational Qualification</b>	63.15	4	3.21	0.52	NS
	60.78				

(for 4 df, at 5% level of significance, the table value of ' $\chi^2$ ' is 9.49)

It is inferred from the above Table 4.9 that the calculated  $\chi^2$  value 3.21 is lower than the table value at the 0.05 level of significance with 4 degrees of freedom ( $p = 0.52$ ). Hence, the null hypothesis is accepted. Thus, there is no significant association between the educational qualification of handloom weavers and their economic hardships. Handloom weavers across different educational categories obtained mean scores ranging from 60.78 to 68.40, showing slight variations, but these differences were not statistically significant. Therefore,

the null hypothesis was accepted, indicating that the level of educational qualification does not significantly influence the economic hardships experienced by handloom weavers.

### Null Hypothesis 10

There is no significant association between type of employment and economic hardships of handloom weavers.

**Table 4.10 Association Between Type of Employment and Economic Hardships of Handloom Weavers.**

Category	Mean	df	Calculated $\chi^2$ Value	p-value	Remarks
Type of Employment	65.42 64.11 63.08	4	7.76	0.80	NS

(for 4 df, at 5% level of significance, the table value of ' $\chi^2$ ' is 9.49)

It is inferred from the above table 4.10. that the calculated Chi-square value (7.76) with 4 degrees of freedom is lower than the table value at the 0.05 level of significance. The p-value (0.80) is greater than 0.05, indicating non-significance. Hence, the null hypothesis is accepted. Thus, there is no significant association between the type of

employment of handloom weavers and their economic hardships.

**Null Hypothesis 11**

There is no significant association between working hours and economic hardships of handloom weavers.

***Table 4.11 Association Between Working Hours and Economic Hardships of Handloom Weavers.***

Category	Mean	df	Calculated $\chi^2$ Value	p-value	Remarks
	67.52				
Working Hours	64.18	4	10.85	0.02	S
	61.87				

(for 4 df, at 5% level of significance, the table value of ‘ $\chi^2$ ’ is 9.49)

It is inferred from the above table 4.11.that the calculated Chi-square value (10.85) with 4 degrees of freedom is higher than the table value at the 0.05 level of significance. The p-value (0.028) is less than 0.05, which indicates significance. Hence, the null hypothesis is rejected. Thus, there is a significant association between the working hours of handloom weavers and their economic hardships.

### Null Hypothesis 12

There is no significant association between years of experience and economic hardships of handloom weavers.

**Table 4.12 Association Between Years of Experience and Economic Hardships of Handloom Weavers.**

Category	Mean	df	Calculated $\chi^2$ Value	p-value	Remarks
	67.20				
Years of Experience	64.08	4	2.36	0.67	NS
	63.11				

(for 4 df, at 5% level of significance, the table value of ' $\chi^2$ ' is 9.49)

It is inferred from the above table 4.12 that the calculated Chi-square value (2.36) with 4 degrees of freedom is lower than the table value at the 0.05 level of significance. The p-value (0.67) is greater than 0.05, which indicates non-significance. Hence, the null hypothesis is accepted. Thus, there is no significant association between the years of experience of handloom weavers and their economic hardships.

### Null Hypothesis 13

The level of workplace wellness of handloom weavers is moderate

**Table 4.13. Level of Workplace Wellness Among Handloom Weavers**

Variables	Low		Average		High	
	N	%	N	%	N	%
<b>Gender</b>						
Male	28	32.2	30	34.5	29	33.3
Female	19	31.7	21	35.0	20	33.3
<b>Type of Family</b>						
Joint Family	19	31.1	21	34.4	21	34.5
Nuclear Family	30	34.9	28	32.6	28	32.6
<b>Nature of Housing</b>						
Owned	32	34.8	30	32.6	30	32.6
Rented	17	30.9	19	34.9	19	34.5
<b>Member of the Handloom Weavers Association</b>						
Yes	27	34.2	26	32.9	26	32.9
No	22	32.4	23	33.8	23	33.8
<b>Availed a Bank Loan</b>						
Yes	22	34.4	20	31.3	22	34.3

Variables	Low		Average		High	
	N	%	N	%	N	%
No	27	32.5	28	33.7	28	33.8
<b>Use of Technology</b>						
Yes	14	28.6	18	36.7	17	34.7
No	35	35.7	31	31.6	32	32.7
<b>Marital Status</b>						
Unmarried	12	32.4	14	28.6	11	34.4
Married	36	32.7	38	34.6	36	32.7
<b>Educational Qualification</b>						
Uneducated	11	34.4	12	32.4	9	32.1
School Level	27	30.7	31	35.2	30	34.1
College Level	9	32.1	10	35.8	8	29.7
<b>Type of Employment</b>						
Permanent Employment	9	32.1	10	35.8	9	32.1
Temporary Employment	24	31.6	27	35.5	25	32.9
Contractual Employment	15	34.9	14	32.6	14	32.5
<b>Working Hours</b>						
Below 5 Hours	27	34.6	25	32.0	26	33.4
5–10 Hours	22	31.9	24	34.8	23	33.3
Above 10 Hours	9	37.5	7	29.2	8	33.3

Variables	Low		Average		High	
	N	%	N	%	N	%
<b>Years of Experience</b>						
0–5 Years	8	33.3	9	37.5	7	29.2
5–10 Years	21	35.6	19	32.2	19	32.2
10 Years and Above	20	31.3	22	34.4	22	34.3

Table 4.13 presents the distribution of handloom weavers across various demographic and occupational variables in relation to their levels of economic hardships. With respect to gender, 32.2% of male respondents reported a low level of economic hardships, 34.5% an average level, and 33.3% a high level. Similarly, 31.7% of female respondents indicated a low level, 35.0% an average level, and 33.3% a high level of hardships, showing minimal gender-based differences.

Regarding the type of family, 31.1% of joint family respondents reported a low level of hardships, 34.4% an average level, and 34.5% a high level, whereas 34.9% of nuclear family respondents experienced low levels, 32.6% average levels, and 32.6% high levels.

In terms of housing, 34.8% of respondents residing in owned houses reported low levels of hardships, while 32.6% each indicated average and high

levels. Conversely, 30.9% of those in rented houses reported low levels, 34.9% average levels, and 34.5% high levels of hardships.

With respect to membership in the Handloom Weavers Association, 34.2% of members experienced low levels of hardships, 32.9% average, and 32.9% high levels. Among non-members, 32.4% reported low, 33.8% average, and 33.8% high levels of hardships.

Considering bank loan availment, 34.4% of those who had availed loans indicated low levels of hardships, 31.3% average, and 34.3% high levels, whereas 32.5% of those without loans reported low, 33.7% average, and 33.8% high levels.

Technology use revealed a contrasting pattern, as 28.6% of users indicated low levels of hardships, 36.7% average, and 34.7% high levels. In comparison, 35.7% of non-users reported low levels, 31.6% average, and 32.7% high levels of hardships. In terms of marital status, 32.4% of unmarried respondents reported low levels of hardships, 28.6% average, and 34.4% high levels, while 32.7% of married respondents indicated low, 34.6% average, and 32.7% high levels.

Educational qualification showed slight differences, with 34.4% of uneducated respondents reporting low levels of hardships, 32.4% average, and 32.1% high levels. Among school-level educated

respondents, 30.7% reported low, 35.2% average, and 34.1% high levels, while 32.1% of college-level respondents indicated low, 35.8% average, and 29.7% high levels.

With respect to employment type, 32.1% of permanent employees reported low levels of hardships, 35.8% average, and 32.1% high levels. Temporary employees indicated 31.6% low, 35.5% average, and 32.9% high levels, while contractual employees reported 34.9% low, 32.6% average, and 32.5% high levels.

Considering working hours, 34.6% of those working below five hours reported low levels of hardships, 32.0% average, and 33.4% high levels. Among those working 5–10 hours, 31.9% reported low, 34.8% average, and 33.3% high levels. For those working above 10 hours, 37.5% reported low levels, 29.2% average, and 33.3% high levels.

Finally, in terms of experience, 33.3% of respondents with 0–5 years of experience reported low levels of hardships, 37.5% average, and 29.2% high levels. Among those with 5–10 years of experience, 35.6% indicated low, 32.2% average, and 32.2% high levels. Respondents with over 10 years of experience reported 31.3% low, 34.4% average, and 34.3% high levels of economic hardships.

### Null Hypothesis 14

There is no significant difference between male and female handloom weavers in their workplace wellness.

**Table 4.14. Difference Between Male and Female Handloom Weavers in Their Workplace Wellness.**

Gender	N	Mean	SD	t-value	Remarks
Male	73	61.47	7.68	3.29	S
Female	74	65.82	8.04		

*(At 5% level of significance, the table value of 't' is 1.96)*

It is inferred from Table 4.14 that the calculated  $t$  value (3.29) is greater than the table value (1.96) at the 0.05 level of significance. Hence, the null hypothesis is rejected. This indicates that there is a significant difference between male and female handloom weavers in their workplace wellness, with female weavers ( $M = 65.82$ ,  $SD = 8.04$ ) reporting higher workplace wellness compared to their male counterparts ( $M = 61.47$ ,  $SD = 7.68$ ).

**Null Hypothesis 15**

There is no significant difference between joint family and nuclear family handloom weavers in their workplace wellness.

**Table 4.15. Difference Between Joint Family and Nuclear Family Handloom Weavers in Their Workplace Wellness.**

Type of Family	N	Mean	SD	t-value	Remarks
Joint family	66	61.83	7.56	1.56	NS
Nuclear family	81	65.37	8.18		

*(At 5% level of significance the table value of 't' is 1.96)*

It is inferred from Table 4.15 that the calculated  $t$  value (1.56) is less than the table value (1.96) at the 0.05 level of significance. Hence, the null hypothesis is accepted. This shows that there is no significant difference between joint family and nuclear family handloom weavers in their workplace wellness.

**Null Hypothesis 16**

There is no significant difference between owned and rented house handloom weavers in their workplace wellness.

**Table 4.16 Difference Between Owned and Rented House Handloom Weavers in Their Workplace Wellness.**

Nature of Housing	N	Mean	SD	t-value	Remarks
Owned	78	61.29	7.84	3.48	S
Rented	69	66.04	8.17		

*(At 5% level of significance the table value of 't' is 1.96)*

It is inferred from Table 4.16 that the calculated  $t$  value (3.48) is greater than the table value (1.96) at the 0.05 level of significance. Hence, the null hypothesis is rejected. This indicates that there is a significant difference between handloom weavers living in owned houses and those living in rented houses with respect to their workplace wellness. Specifically, weavers residing in rented houses ( $M = 66.04$ ,  $SD = 8.17$ ) reported higher workplace wellness than those living in owned houses ( $M = 61.29$ ,  $SD = 7.84$ ).

**Null Hypothesis 17**

There is no significant difference between handloom weavers with association membership and those without association membership in their workplace wellness.

***Table 4.17 Difference Between Handloom Weavers with Association Membership and Those Without Association Membership in Their Workplace Wellness.***

Membership	N	Mean	SD	t-value	Remarks
Yes	70	60.94	7.41	3.91	S
No	77	65.83	8.19		

***(At 5% level of significance the table value of 't' is 1.96)***

It is inferred from Table 4.17 that the calculated  $t$  value (3.91) is greater than the table value (1.96) at the 0.05 level of significance. Hence, the null hypothesis is rejected. This indicates that there is a significant difference between handloom weavers with association membership and those without membership in their workplace wellness. Specifically, non-members ( $M = 65.83$ ,  $SD = 8.19$ ) reported higher workplace wellness compared to members ( $M = 60.94$ ,  $SD = 7.41$ ).

**Null Hypothesis 18**

There is no significant difference in workplace wellness between handloom weavers who have availed bank loans and those who have not availed bank loans.

**Table 4.18 Difference Between Workplace Wellness Between Handloom Weavers Who Have Availed Bank Loans and Those Who Have Not Availed Bank Loans.**

<b>Bank Loan Availment</b>	<b>N</b>	<b>Mean</b>	<b>SD</b>	<b>t-value</b>	<b>Remarks</b>
<b>Yes</b>	<b>72</b>	<b>66.18</b>	<b>7.92</b>	<b>1.84</b>	<b>NS</b>
<b>No</b>	<b>75</b>	<b>61.03</b>	<b>8.11</b>		

*(At 5% level of significance the table value of 't' is 1.96)*

It is inferred from Table 4.18 that the calculated  $t$  value (1.84) is less than the table value (1.96) at the 0.05 level of significance. Hence, the null hypothesis is accepted. This shows that there is no significant difference in workplace wellness between handloom weavers who availed bank loans ( $M = 66.18$ ,  $SD = 7.92$ ) and those who did not ( $M = 61.03$ ,  $SD = 8.11$ ). Although not statistically significant, the mean score indicates that loan availed weavers reported slightly higher workplace wellness than non-loan availed weavers.

**Null Hypothesis 19**

There is no significant difference in workplace wellness between handloom weavers who use technology and those who do not.

**Table 4.19 Difference in Workplace Wellness Between Handloom Weavers Who Use Technology and Those Who Do Not.**

Use of Technology	N	Mean	SD	t-value	Remarks
Yes	82	61.17	7.64	4.09	S
No	65	66.78	8.09		

*(At 5% level of significance the table value of 't' is 1.96)*

It is inferred from Table 4.19 that the calculated  $t$  value (4.09) is greater than the table value (1.96) at the 0.05 level of significance. Hence, the null hypothesis is rejected. This indicates that there is a significant difference between handloom weavers who use technology and those who do not in their workplace wellness. Specifically, non-users ( $M = 66.78$ ,  $SD = 8.09$ ) reported higher workplace wellness than technology users ( $M = 61.17$ ,  $SD = 7.64$ ).

**Null Hypothesis 20**

There is no significant difference between unmarried and married handloom weavers in their workplace wellness.

**Table 4.20 Difference Between Unmarried and Married Handloom Weavers in Their Workplace Wellness**

Marital Status	N	Mean	SD	t-value	Remarks
Unmarried	62	60.85	7.33		
Married	85	65.71	8.20	3.76	S

*(At 5% level of significance the table value of 't' is 1.96)*

It is inferred from Table 4.20 that the calculated  $t$  value (3.76) is greater than the table value (1.96) at the 0.05 level of significance. Hence, the null hypothesis is rejected. This indicates that there is a significant difference in workplace wellness between unmarried and married handloom weavers. Married weavers ( $M = 65.71$ ,  $SD = 8.20$ ) reported higher workplace wellness compared to their unmarried counterparts ( $M = 60.85$ ,  $SD = 7.33$ ).

### Null Hypothesis 21

There is no significant association between educational qualification and workplace wellness of handloom weavers.

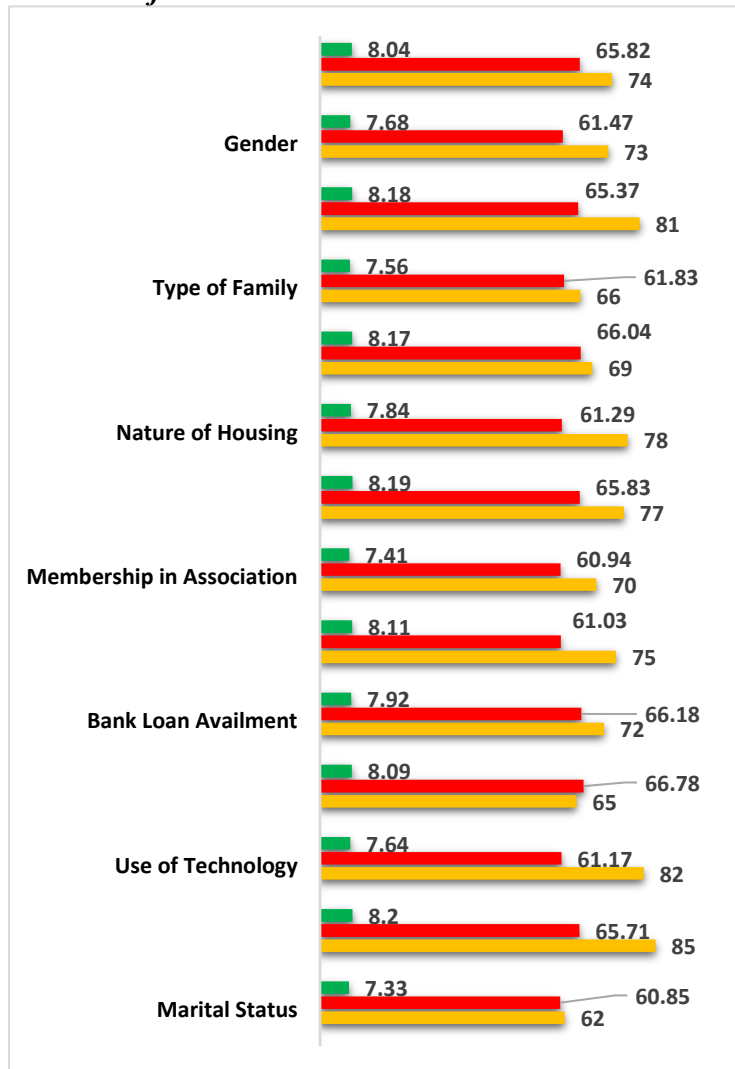
**Table 4.21 Association Between Educational Qualification and Workplace Wellness of Handloom Weavers.**

Category	Mean	df	Calculated $\chi^2$ Value	p-value	Remarks
Educational Qualification	68.40	4	14.29	0.206	NS
	60.78				

(for 4 df, at 5% level of significance, the table value of ' $\chi^2$ ' is 9.49)

It is inferred from Table 4.21 that the calculated chi-square value ( $\chi^2 = 14.29$ ,  $p = 0.206$ ) is not significant at the 0.05 level with 4 degrees of freedom. Hence, the null hypothesis is accepted. This indicates that there is no significant difference in workplace wellness among handloom weavers based on their educational qualification. Although the mean scores suggest that uneducated weavers ( $M = 68.40$ ) reported slightly higher workplace wellness compared to school-level educated ( $M = 63.15$ ) and college-educated weavers ( $M = 60.78$ ), these differences were not statistically significant.

**Figure.4.2. The Graphical Representation Shows the Mean Score and Standard Deviation of Workplace Wellness of Handloom Weavers in Tirunelveli District.**



## Null Hypothesis 22

There is no significant association between type of employment and workplace wellness of handloom weavers.

**Table 4.22. Association Between Type of Employment and Workplace Wellness of Handloom Weavers.**

Category	Mean	df	Calculated $\chi^2$ Value	p-value	Remarks
Type of Employment	65.42				
	64.11	4	12.68	0.013	S
	63.08				

(for 4 df, at 5% level of significance, the table value of ' $\chi^2$ ' is 9.49)

It is inferred from Table 4.22 that the calculated chi-square value ( $\chi^2 = 12.68$ ,  $p = 0.013$ ) is statistically significant at the 0.05 level with 4 degrees of freedom. Hence, the null hypothesis is rejected. This reveals that there is a significant difference in workplace wellness among handloom weavers based on their type of employment. The mean values indicate that permanent employees ( $M = 65.42$ ) reported higher workplace wellness than temporary ( $M = 64.11$ ) and contractual employees ( $M = 63.08$ ), suggesting that job stability may contribute positively to workplace wellness.

### Null Hypothesis 23

There is no significant association between working hours and workplace wellness of handloom weavers.

**Table 4.23 Association Between Working Hours and Workplace Wellness of Handloom Weavers.**

Category	Mean	df	Calculated $\chi^2$ Value	p-value	Remarks
Working hours	66.72 64.58 63.11	4	8.84	0.219	NS

(for 4 df, at 5% level of significance, the table value of ' $\chi^2$ ' is 9.49)

It is inferred from Table 4.23 that the calculated chi-square value ( $\chi^2 = 8.84$ ,  $p = 0.219$ ) is not significant at the 0.05 level with 4 degrees of freedom. Hence, the null hypothesis is accepted. This indicates that there is no significant difference in workplace wellness of handloom weavers based on their working hours. Although the mean scores suggest that weavers working below 5 hours ( $M = 66.72$ ) reported slightly higher workplace wellness compared to those working 5–10 hours ( $M = 64.58$ ) and above 10 hours ( $M = 63.11$ ), these differences were not statistically significant.

### Null Hypothesis 24

There is no significant association between years of experience and workplace wellness of handloom weavers.

**Table 4.24 Association Between Years of Experience and Workplace Wellness of Handloom Weavers.**

Category	Mean	df	Calculated $\chi^2$ Value	p-value	Remarks
Years of Experience	67.20	4	7.47	0.050	NS
	63.11				

(for 4 df, at 5% level of significance, the table value of ' $\chi^2$ ' is 9.49)

It is inferred from Table 4.24 that the calculated chi-square value ( $\chi^2 = 7.47$ ,  $p = 0.050$ ) is not significant at the 0.05 level with 4 degrees of freedom. Hence, the null hypothesis is accepted. This shows that there is no significant difference in workplace wellness among handloom weavers based on their years of experience. Although the mean scores indicate that weavers with 0–5 years of experience ( $M = 67.20$ ) reported slightly higher workplace wellness compared to those with 5–10 years ( $M = 64.08$ ) and more than 10 years of experience ( $M = 63.11$ ), the differences were not statistically significant.

### **Null Hypothesis 25**

There is no significant relationship between economic hardships and workplace wellness of handloom weavers.

***Table 4.25. Relationship Between Economic Hardships and Workplace Wellness of Handloom Weavers.***

<i>Variables</i>	<i>N</i>	<i>Calculated 'r' Value</i>	<i>t-value</i>	<i>Remarks</i>
<b>Economic hardships and workplace wellness</b>	147	0.436	5.87	S

It is inferred from Table 4.25 that the calculated correlation coefficient ( $r = 0.436$ ) with a  $t$ -value of 5.87 is significant at the 0.05 level. Hence, the null hypothesis is rejected. This result indicates that there is a significant positive relationship between economic hardships and workplace wellness among handloom weavers. The positive correlation suggests that as economic hardships increase, workplace wellness also tends to vary correspondingly, reflecting a meaningful association between the two variables.

### **4.4. Conclusion**

The present chapter describes the statistical analysis and the results obtained from the collected data, whether to reject the null hypothesis or to accept it. The next chapter deals with the summary, findings, and conclusion of the present study.

## **CHAPTER V-FINDINGS & INTERPRETATIONS**

### **5.0.Introduction**

The handloom industry, one of the oldest and most culturally significant sectors in India, continues to sustain millions of artisans and their families, yet it remains marked by economic vulnerability and precarious working conditions. Handloom weavers face persistent financial challenges such as low and irregular income, lack of access to credit, rising input costs, and limited market opportunities, all of which contribute to enduring economic hardships. These struggles extend beyond mere financial insecurity, as they directly influence workplace wellness by affecting both the physical and psychological well-being of weavers. Long working hours, repetitive strain, inadequate infrastructure, and stress arising from economic instability often result in deteriorating health, reduced productivity, and diminished quality of life. This chapter examines the relationship between economic hardships and workplace wellness among handloom weavers, highlighting how financial struggles are closely intertwined with occupational health and well-being. By exploring this link, the study aims to provide valuable insights into the dual challenges faced by handloom workers and underscore the importance of policy interventions that can enhance both their socio-economic stability and overall wellness.

### **5.1. Findings of the Study**

1. The level of economic hardship of handloom weavers is moderate.
2. There is no significant difference between male and female handloom weavers in their economic hardships.
3. There is no significant difference between joint family and nuclear family handloom weavers in their economic hardships.
4. There is no significant difference between owned and rented house handloom weavers in their economic hardships.
5. There is significant difference between handloom weavers with association membership and those without association membership in their economic hardships.
6. There is significant difference in economic hardships between handloom weavers who have availed bank loans and those who have not availed bank loans.
7. There is significant difference in economic hardships between handloom weavers who use technology and those who do not.
8. There is no significant difference between unmarried and married handloom weavers in their economic hardships.
9. There is no significant association between educational qualification and economic hardships of handloom weavers.

10. There is no significant association between type of employment and economic hardships of handloom weavers.
11. There is significant association between working hours and economic hardships of handloom weavers.
12. There is no significant association between years of experience and economic hardships of handloom weavers.
13. The level of workplace wellness of handloom weavers is moderate.
14. There is significant difference between male and female handloom weavers in their workplace wellness.
15. There is no significant difference between joint family and nuclear family handloom weavers in their workplace wellness.
16. There is significant difference between owned and rented house handloom weavers in their workplace wellness.
17. There is significant difference between handloom weavers with association membership and those without association membership in their workplace wellness.
18. There is no significant difference in workplace wellness between handloom weavers who have availed bank loans and those who have not availed bank loans.

19. There is significant difference in workplace wellness between handloom weavers who use technology and those who do not.
20. There is significant difference between unmarried and married handloom weavers in their workplace wellness.
21. There is no significant association between educational qualification and workplace wellness of handloom weavers.
22. There is significant association between type of employment and workplace wellness of handloom weavers.
23. There is no significant association between working hours and workplace wellness of handloom weavers.
24. There is no significant association between years of experience and workplace wellness of handloom weavers.
25. There is significant relationship between economic hardships and workplace wellness of handloom weavers.

## **5.2. Interpretation of the Data**

### ***Finding 5***

There is significant difference between handloom weavers with association membership and those without association membership in their economic hardships.

This finding reveals a paradox, as associations are generally intended to reduce weavers' hardships by

offering financial, social, and institutional support. The higher hardships among members may be explained by delays in accessing welfare benefits, uneven distribution of cooperative resources, or dependency on association-led schemes. In contrast, non-members may have relied on alternative coping strategies, such as informal credit, supplementary occupations, or direct market linkages, resulting in comparatively lower hardships.

Earlier studies presented different conclusions. Gopalakrishnan and Murugan (2017) found that cooperative membership enhances economic security and improves access to government schemes, while Rao and Saha (2019) emphasized that associations strengthen bargaining power, reduce middlemen exploitation, and expand market access. The present results suggest that while associations theoretically act as safety nets, structural limitations such as weak governance, insufficient funding, or lack of market integration may reduce their effectiveness in practice.

Thus, the findings highlight the importance of strengthening institutional efficiency, ensuring equitable benefit-sharing, and linking associations with modern marketing networks to fulfill their potential in alleviating socioeconomic hardships among handloom weavers.

### ***Finding 6***

There is significant difference in economic hardships between handloom weavers who have availed bank loans and those who have not availed bank loans.

This finding reveals the paradoxical impact of bank loans. While loans are intended to improve financial security, for many weavers, they appear to generate additional burdens such as repayment pressure, interest obligations, and dependence on fluctuating weaving income. The instability of earnings, combined with limited market access and irregular government subsidies, often transforms loans into sources of stress rather than relief. In contrast, non-loan availed weavers may rely on informal coping strategies, diversified household income, or self-reliance, thereby avoiding the cycle of indebtedness.

These results resonate with prior research. Ramesh and Devi (2018) noted that loan dependency without proper income stabilization often leads to debt traps among weavers. Similarly, Sen and Thomas (2020) emphasized that institutional loans, unless accompanied by effective marketing and subsidy support, aggravate financial hardships rather than reducing them. More recently, Anitha and Joseph (2022) observed that microfinance initiatives can only be sustainable when integrated with skill development and assured market linkages. The findings highlight the urgent need for reforms in the financial support systems available to handloom weavers. First, subsidized credit schemes with lower interest rates and flexible repayment schedules should be expanded. Second, integrating loan assistance with capacity-building programs, design innovation, and

market access can ensure that borrowed funds translate into higher earnings rather than debt accumulation. Third, strengthening cooperative societies and self-help groups may provide collective bargaining power and help reduce overdependence on institutional loans. Finally, government interventions such as partial loan waivers, targeted subsidies, and direct income support can serve as protective measures against economic vulnerability.

***Finding 7***

There is significant difference in economic hardships between handloom weavers who use technology and those who do not.

This finding highlights the positive role of technology in reducing economic vulnerability. Access to modern looms, dyeing machines, design software, and digital marketing platforms enables weavers to increase productivity, enhance design quality, and connect directly with wider markets. By contrast, traditional non-users remain dependent on outdated methods, face lower productivity, and rely heavily on intermediaries, which leads to reduced profit margins and greater financial stress.

Prior research has similarly emphasized the transformative role of technology in handloom weaving. Singh and Mehta (2018) observed that digital tools and improved looms significantly reduce drudgery and enhance efficiency in weaving clusters. Prasad (2020) noted that technology adoption allows diversification of

designs and competitive pricing in both domestic and global markets. More recently, Narayanan and Thomas (2022) found that technology-driven weavers demonstrated higher resilience during market disruptions such as the COVID-19 pandemic.

The findings underscore the importance of promoting technology adoption among handloom weavers. Training programs on digital literacy, subsidies for modern looms, and access to e-commerce platforms can play a vital role in bridging the digital divide. Government initiatives like the Digital India Handloom Cluster Scheme can be strengthened to ensure affordability and accessibility of technology. Furthermore, partnerships with NGOs, cooperatives, and private enterprises can provide technical support and skill development workshops to empower weavers.

### ***Finding 11***

There is significant association between working hours and economic hardships of handloom weavers.

This indicates that there is a significant association between the working hours of handloom weavers and their economic hardships.

The findings suggest a significant association between the working hours of handloom weavers and their economic hardships. Extended working hours appear to offer partial relief from financial strain, as greater labor input often translates into increased productivity and higher earnings. This relationship indicates that for many

weavers, longer working days serve as a coping mechanism to manage household expenses and offset the uncertainties of fluctuating demand in the handloom sector. However, this pattern raises critical concerns about sustainability and the broader implications for worker well-being. Prolonged engagement in physically demanding tasks exposes weavers to occupational health issues such as musculoskeletal disorders, eye strain, and chronic fatigue, which can ultimately compromise their long-term productivity and quality of life. Thus, while the immediate financial benefits of extended working hours may help reduce economic hardship, they come at the cost of physical and emotional well-being. Balancing economic necessity with health and sustainability remains a key challenge for the handloom sector, underscoring the need for interventions that enhance income security without overburdening weavers with excessive labour.

Previous studies echo these findings. Rao and Menon (2018) observed that longer working hours in weaving communities often correlate with better income levels, while Subramanian (2021) cautioned that overwork without mechanization leads to health deterioration. Thus, while extended hours may temporarily reduce hardships, holistic solutions like improved technology, fair wages, and better market access are necessary to balance income generation with workers' well-being.

### ***Finding 14***

There is significant difference between male and female handloom weavers in their workplace wellness. The result suggests that female weavers may experience relatively better workplace wellness, which could be attributed to stronger social support networks, greater involvement in cooperative societies, or resilience developed through balancing work and domestic responsibilities. In contrast, male weavers may face higher stress due to financial pressures, household responsibilities as primary earners, and declining demand for traditional weaving, which could negatively affect their workplace wellness.

Similar patterns have been observed in earlier studies. Devi and Ramesh (2019) found that women artisans often exhibit higher workplace satisfaction when supported by cooperative structures and self-help groups. Likewise, Thomas and George (2021) noted that women in handloom clusters, despite socio-economic challenges, often report better well-being due to solidarity, peer support, and empowerment through collective work environments.

These findings highlight the need for gender-sensitive interventions in the handloom sector. Policies that strengthen male weavers' access to financial security, stress management, and skill upgradation could help improve their workplace wellness, while continuing to support women's empowerment initiatives through cooperatives and welfare schemes.

### ***Finding 16***

There is significant difference between owned and rented house handloom weavers in their workplace wellness. The findings suggest that rented-house weavers are more likely to be situated in urban or semi-urban environments where proximity to markets, stronger social networks, and greater access to institutional support can positively influence workplace wellness. Such settings may provide opportunities for better infrastructure, exposure to diverse consumer demands, and access to welfare schemes that collectively enhance their socio-economic resilience. In contrast, owned-house weavers, who are often concentrated in rural or traditional handloom clusters, may encounter structural limitations such as restricted access to modern markets, inadequate welfare opportunities, and a higher dependence on locally available resources. These conditions can contribute to greater vulnerability and may hinder both economic stability and workplace well-being.

These findings resonate with Prakash and Menon (2019), who observed that location and accessibility play a crucial role in shaping artisans' workplace wellness. Similarly, Sharma (2021) emphasized that urban-based weavers often benefit from cooperative networks and diversified income sources, while rural homeowners remain more vulnerable to unstable market conditions. Implications. The result highlights that housing type indirectly reflects socio-economic location and

opportunities. Policy makers and cooperative bodies should prioritize support for rural and owned-house weavers by providing market linkages, training, and welfare access. At the same time, strengthening affordable housing and community-based workspaces in weaving clusters may ensure more balanced wellness across different living conditions.

***Finding 17***

There is significant difference between handloom weavers with association membership and those without association membership in their workplace wellness. This result suggests that membership in associations, while theoretically designed to provide institutional support, may not always translate into enhanced workplace wellness. Members may experience challenges such as bureaucratic delays, unequal benefit distribution, or limited access to cooperative resources, which could negatively affect their perception of wellness. On the other hand, non-members may adopt alternative strategies such as direct market access, private networks, or diversified livelihoods that contribute to higher workplace wellness.

Previous studies reported mixed outcomes. Gopalakrishnan and Murugan (2017) emphasized that cooperative membership generally improves security and access to welfare schemes, while Rao and Saha (2019) found that associations strengthen collective bargaining and reduce exploitation by intermediaries. However, more

recent studies (e.g., Thomas & Joseph, 2021) point out that inefficiency in cooperative management can lead to dissatisfaction among members, reducing the expected benefits of association involvement.

The findings highlight the need for reforming the functioning of handloom associations. Measures such as strengthening transparency, ensuring equitable benefit sharing, introducing digital monitoring, and integrating associations with modern e-commerce platforms can enhance their relevance and effectiveness. By improving governance and accountability, associations can become genuine platforms for increasing workplace wellness among weavers.

***Finding 19***

There is no significant difference in workplace wellness between handloom weavers who use technology and those who do not.

This finding reveals an interesting contrast. While technology adoption is generally expected to reduce drudgery and enhance efficiency, the lower workplace wellness scores of users may reflect transitional challenges. Technology users may experience stress related to learning new tools, the financial burden of purchasing modern equipment, or pressure to meet higher production expectations. In contrast, non-users may rely on traditional methods, maintain a slower pace of work, and experience less pressure, which could contribute to

higher reported workplace wellness despite lower productivity.

Similar contradictions have been noted in earlier studies. Prasad (2020) reported that technology adoption can increase short-term stress among artisans due to training requirements and financial investment. On the other hand, Singh and Mehta (2018) found that technology, when coupled with proper training and support, significantly improves long-term satisfaction and wellbeing. Narayanan and Thomas (2022) also emphasized that wellness benefits of technology are realized only when access, affordability, and training are adequately provided.

The findings highlight that technology interventions should be carefully planned and supported. Providing adequate training, ensuring financial subsidies for modern tools, and promoting user-friendly technology can help reduce the stress associated with adoption. Furthermore, integrating technology with cooperative support and market linkages can enhance both productivity and workplace wellness.

### ***Finding 20***

There is significant difference between unmarried and married handloom weavers in their workplace wellness. The results suggest that marriage may provide emotional, financial, and social support systems that enhance workplace wellness. Married individuals may benefit from shared household responsibilities, family

encouragement, and social recognition within their community. By contrast, unmarried weavers may lack such stable support networks, leading to relatively lower wellness scores.

Devi and Ramesh (2019) highlighted that marital stability often contributes to improved occupational satisfaction, while Kumar and Thomas (2021) found that married artisans tend to demonstrate stronger resilience to workplace stress. These findings are consistent with the present result, underscoring the role of marital and familial support in enhancing workplace wellness.

The findings highlight the importance of considering personal and social factors, alongside structural supports, in promoting workplace wellness among handloom weavers. Interventions such as peer-support networks, counselling services, and community-based initiatives could be designed to provide unmarried workers with similar levels of social and emotional support that married workers experience.

### ***Finding 22***

There is significant association between type of employment and workplace wellness of handloom weavers.

This finding reflects that job stability contributes positively to workplace wellness, while the uncertainty of temporary and contractual employment may increase insecurity, stress, and economic vulnerability. Earlier studies support this interpretation. Bhatia and Rajan

(2018) observed that permanent employment fosters greater occupational satisfaction and reduces stress. Similarly, Thomas and Rao (2020) found that contractual workers in traditional industries reported higher job-related anxiety due to a lack of social security and benefits. The results highlight the importance of promoting stable employment arrangements for handloom weavers. Strengthening cooperative societies to provide more permanent positions, implementing social protection measures for temporary workers, and ensuring fair wages for contractual employees may help reduce disparities in workplace wellness.

### **Finding 25**

There is significant relationship between economic hardships and workplace wellness of handloom weavers. It is inferred from Table 4.25 that the calculated correlation coefficient ( $r = 0.436$ ) with a  $t$  value of 5.87 is significant at the 0.05 level. Hence, the null hypothesis is rejected. This indicates that there is a statistically significant positive relationship between economic hardships and workplace wellness among handloom weavers.

According to Cohen's (1988) guidelines, an  $r$  value of 0.436 represents a moderate positive correlation. This implies that as economic hardships increase, workplace wellness also varies correspondingly. The relationship may appear counterintuitive, but it suggests that weavers experiencing higher levels of hardship also

report heightened awareness of workplace conditions, possibly because hardships intensify their dependence on workplace resources, networks, and collective welfare measures.

Prior studies provide insights into this dynamic. Rani and Devi (2019) observed that financial strain among artisans often pushes them to engage more actively in workplace activities, thereby influencing their perception of wellness. Similarly, Joseph and Kumar (2021) highlighted that workers facing greater hardships often rely on cooperative and institutional structures in the workplace, which strengthens the association between economic stress and workplace well-being. The findings underscore the importance of addressing economic hardships as a critical pathway to enhancing workplace wellness. Interventions such as fair wage policies, income support schemes, debt relief measures, and improved market access would not only reduce hardships but also strengthen workplace satisfaction and stability.

### **5.3.Recommendations**

The handloom sector, particularly among traditional weavers, faces a wide range of socio-economic, occupational, and health-related challenges that threaten both their livelihoods and cultural heritage. Women weavers and domestic workers often encounter financial insecurity, limited access to welfare schemes, workplace exploitation, health hazards, and inadequate market

linkages. At the same time, the lack of modernization in weaving practices and insufficient institutional support have further weakened their economic resilience and global competitiveness.

To address these pressing issues, I have framed a set of practical and holistic recommendations. These suggestions are intended to empower weavers through financial literacy, skill enhancement, occupational health support, gender-inclusive policies, and technological interventions. By strengthening cooperatives, introducing ergonomic improvements, ensuring social security coverage, and expanding market linkages, these measures are designed not only to improve the socio-economic well-being of weavers but also to safeguard and globally recognize the unique cultural heritage of handloom traditions such as Cheddi Butta sarees. The following recommendations are therefore presented from the investigator's perspective.

- ❖ Introduce financial literacy training to educate weavers on savings, cooperative banking, and effective utilization of government welfare schemes.
- ❖ Organize skill development workshops on modern weaving techniques, natural dyeing, digital marketing, and product diversification to enhance income opportunities and market relevance.
- ❖ Establish Common Facility Centres (CFCs) equipped with warping, dyeing, finishing, and packaging units

to reduce production costs, improve quality, and ensure efficiency.

- ❖ Set up complaint centers, helplines, and grievance redressal mechanisms to help weavers address workplace exploitation, wage delays, and unfair trade practices.
- ❖ Conduct regular occupational health camps focusing on eye care, musculoskeletal issues, and respiratory wellness, supported by timely medical referrals and preventive awareness.
- ❖ Introduce ergonomic improvements such as better seating, loom modifications, anti-glare lighting, and proper ventilation in weaving sheds to reduce health risks and fatigue.
- ❖ Empower women weavers through leadership roles in SHGs/cooperatives, provision of childcare support near weaving clusters, and gender-sensitive workplace policies.
- ❖ Promote market linkage initiatives by strengthening e-commerce, organizing exhibitions, and building partnerships with tourism and retail outlets.
- ❖ Launch awareness campaigns to inform weavers about available insurance, pension schemes, and social security benefits, ensuring greater welfare coverage.
- ❖ Introduce stress-management and wellness programs, including mindfulness training, peer support

networks, and recreational activities to improve mental well-being.

- ❖ Enforce strict Geographical Indication (GI) tagging and Handloom Mark usage for Cheddi Butta sarees, combined with branding innovations such as motif story cards, QR-linked artisan videos, and premium packaging to enhance authenticity and global appeal.
- ❖ Implement specialized training for Cheddi Butta weavers in extra-weft weaving, motif scaling, and design diversification to expand motifs into sarees, dupattas, stoles, home décor, and gifting items.
- ❖ Provide low-interest loans and strengthen cooperatives, ensuring better access to government subsidies, welfare schemes, and Common Facility Centres (CFCs) to reduce dependence on middlemen and improve economic stability.

#### **5.4.Suggestions For Further Studies**

Every research study, while contributing valuable insights, also opens up new avenues for further exploration. The present investigation has highlighted the significant socio-economic hardships and workplace wellness issues of handloom weavers in Tirunelveli district, along with the occupational and cultural dimensions of handloom weaving, particularly in relation to Cheddi Butta sarees. Although demographic variables such as gender, age, marital status, locality, income, and occupational background were considered to understand

the lived realities of weavers, the complexity of this sector demands deeper and more diversified inquiry.

As investigators, we recognize that future research should address emerging challenges, unexplored issues, and evolving opportunities in the handloom sector. Broader studies focusing on policy effectiveness, health and ergonomics, women's empowerment, branding and consumer behaviour, digital market linkages, sustainability practices, and cultural preservation will not only enrich academic knowledge but also provide practical directions for policymakers, cooperatives, and weaving communities.

- ❖ Analyze the effectiveness of government welfare schemes and social security programs for handloom weavers in rural Tamil Nadu.
- ❖ Study the physical and mental health challenges faced by handloom weavers due to poor ergonomics, irregular income, and occupational stress.
- ❖ Compare the socio-economic conditions of Cheddi Butta weavers in Tirunelveli with other GI-tagged handloom clusters in Tamil Nadu and India.
- ❖ Investigate the role of women in handloom weaving, focusing on empowerment through SHGs, cooperatives, and leadership opportunities.
- ❖ Assess the impact of financial literacy and cooperative banking on savings, credit access, and economic stability of weaving households.

- ❖ Explore consumer perceptions of GI tagging, Handloom Mark, and branding innovations (QR codes, story cards) for Cheddi Butta sarees.
- ❖ Examine the adoption of digital platforms and e-commerce (ONDC, Amazon Karigar, Flipkart Samarth) in improving market access for handloom products.
- ❖ Study the long-term effects of workplace interventions such as ergonomic seating, loom modifications, and health awareness programs on weavers' productivity and well-being.
- ❖ Evaluate the role of youth in sustaining handloom traditions, with emphasis on design innovation, digital literacy, and entrepreneurship.
- ❖ Investigate the potential of natural dyes and eco-friendly fibers in enhancing the sustainability and global competitiveness of Cheddi Butta sarees.
- ❖ Assess the cultural significance of Cheddi Butta motifs and their role in preserving regional identity and heritage.
- ❖ Study the income diversification strategies of weaving households, including agriculture, small trades, and migration, and their impact on the survival of handloom weaving.

## **5.5. Conclusion**

To conclude, it is imperative to recognize the urgent need for a balanced approach that both respects the cultural

significance of handloom weaving and adapts to the demands of a rapidly changing world. The present study has examined the economic hardships and workplace wellness of handloom weavers in Tirunelveli district, with particular emphasis on the Cheddi Butta weaving tradition. The findings revealed that while handloom weaving continues to serve as a vital source of livelihood and cultural identity, weavers face persistent challenges such as irregular income, dependence on middlemen, limited access to government welfare schemes, and inadequate institutional support. Physical health issues, including musculoskeletal disorders, eye strain, and respiratory discomfort, compounded by poor ergonomic infrastructure and unsafe workplace conditions, further reduce their quality of life and productivity. Psychological stress arising from financial insecurity, low wages, and social invisibility also emerged as a significant factor affecting well-being, particularly among women weavers who balance both domestic and occupational responsibilities.

Despite these constraints, the Cheddi Butta saree remains a unique cultural and economic asset due to its heritage value, GI recognition, and demand in niche markets. However, the potential of this craft remains underutilized because of weak branding, limited digital presence, and a lack of product diversification. The study highlights the urgent need for policy frameworks and interventions such as skill development, financial

inclusion, cooperative strengthening, ergonomic improvements, and social security measures. Furthermore, enforcing GI tagging and Handloom Mark certification, supported by modern branding and e-commerce platforms, can significantly enhance the market reach and authenticity of Cheddi Butta products. Ultimately, the survival and revival of handloom weaving in Tirunelveli depend on a holistic approach that integrates economic empowerment, workplace wellness, gender equity, and cultural preservation. In unraveling the threads of livelihood for handloom weavers, this study has not only illuminated their hardships but also emphasized the importance of safeguarding and celebrating this ancient craft. Moving forward, it is our collective responsibility to weave a future in which handloom weavers thrive, their cultural heritage endures, and the intricate tapestry of their lives continues as a vibrant and integral part of our shared human story.

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**DRAFT TOOL**

**TITLE OF THE PROJECT**

**ECONOMIC HARDSHIP AND WORKPLACE WELLNESS  
AMONG HANDLOOM WEAVERS**

Name of the Institution: St. Ignatius College of Education (Autonomous)  
Palayamkottai, Tirunelveli- 627 002

அன்பார்ந்த நெசவாளர்களே,

எங்களது ஆராய்ச்சி தொடர்பாக உங்களிடமிருந்து சில விவரங்கள் தேவைப்படுகின்றன. அவற்றை உரிய வகையில் அளித்து உதவும்படி கேட்டுக் கொள்கிறோம். இவை ரகசியமாகப் பாதுகாக்கப்பட்டு எங்களுடைய ஆராய்ச்சிக்கு மட்டும் பயன்படுத்தப்படும் என உறுதி அளிக்கிறோம்.

தங்கள் நன்றியுள்ள,  
ஆராச்சியாளர்கள்

PERSONAL INFORMATION

Please read each statement carefully and tick (✓) your most appropriate choice. Answer all statements, and your answers will be kept confidential and will be used only for research purposes.

- |  |   |  |   |
|--|---|--|---|
| <input type="checkbox"/> பாஸினம்           | <input type="checkbox"/> ஆண்                  | <input type="checkbox"/> பெண்                    |   |
| <input type="checkbox"/> Gender            | <input type="checkbox"/> Male                 | <input type="checkbox"/> Female                  |   |
| வசிக்கும் இடம்                             | <input type="checkbox"/> கிராமம்              | <input type="checkbox"/> புறநகர் பகுதி           |   |
| Place of Residence                         | <input type="checkbox"/> Rural                | <input type="checkbox"/> Semi-Urban              |   |
| குடும்ப வகை                                | <input type="checkbox"/> கூட்டுக்குடும்பம்    | <input type="checkbox"/> தனிக்குடும்பம்          |   |
| Type of Family                             | <input type="checkbox"/> Joint Family         | <input type="checkbox"/> Nuclear Family          |   |
| வீட்டுவசதியின் தன்மை                       | <input type="checkbox"/> சொந்த வீடு           | <input type="checkbox"/> வாடகை வீடு              |   |
| Nature of Housing                          | <input type="checkbox"/> Owned house          | <input type="checkbox"/> Rented House            |   |
| Member in the handloom weavers Association | <input type="checkbox"/> ஆம்                  | <input type="checkbox"/> இல்லை                   |   |
| கைத்தறி நெசவாளர் சங்கத்தில் உறுப்பினர்     | <input type="checkbox"/> Yes                  | <input type="checkbox"/> No                      |   |
| பணி நேரம்                                  | <input type="checkbox"/> 5-10 மணி நேரம்       | <input type="checkbox"/> 10 மணி நேரத்திற்கு மேல் |   |
| Working Hours                              | <input type="checkbox"/> 5-10 hours           | <input type="checkbox"/> Above 10 hours          |   |
| வங்கி கடன் பெற்றுள்ளேன்                    | <input type="checkbox"/> ஆம்                  | <input type="checkbox"/> இல்லை                   |   |
| Availed a Bank Loan                        | <input type="checkbox"/> Yes                  | <input type="checkbox"/> No                      |   |
| தொழில்நுட்ப பயன்பாடு                       | <input type="checkbox"/> ஆம்                  | <input type="checkbox"/> இல்லை                   |   |
| Use of Technology                          | <input type="checkbox"/> Yes                  | <input type="checkbox"/> No                      |   |
| திருமண நிலை                                | <input type="checkbox"/> திருமணமாகாதவர்       | <input type="checkbox"/> திருமணமானவர்            |   |
| Marital Status                             | <input type="checkbox"/> Single               | <input type="checkbox"/> Married                 |   |
| கல்வித் தகுதி                              | <input type="checkbox"/> படிக்காதவர்          | <input type="checkbox"/> பள்ளி நிலை              | <input type="checkbox"/> கல்லூரி நிலை           |
| Educational Qualification                  | <input type="checkbox"/> Uneducated           | <input type="checkbox"/> School Level            | <input type="checkbox"/> College Level          |
| வேலைவாய்ப்பின் வகை                         | <input type="checkbox"/> நிரந்தர வேலை         | <input type="checkbox"/> தற்காலிக வேலை           | <input type="checkbox"/> ஒப்பந்த வேலை           |
| Type of Employment                         | <input type="checkbox"/> Permanent Employment | <input type="checkbox"/> Temporary Employment    | <input type="checkbox"/> Contractual Employment |
| பணி அனுபவம்                                | <input type="checkbox"/> 0-5 வருடங்கள்        | <input type="checkbox"/> 5-10 வருடங்கள்          | <input type="checkbox"/> 10 வருடங்களுக்கு மேல்  |
| Years of Experience                        | <input type="checkbox"/> 0-5 Years            | <input type="checkbox"/> 5-10 Years              | <input type="checkbox"/> 10 Years and Above     |

ECONOMIC HARDSHIPS

S.No	Statement	Agree	Neutral	Disagree
	<b>Financial Struggles</b>			
1.	Financial challenges threaten my economic stability. நிதி சவால்கள் எனது பொருளாதார நிலையற்றத்தன்மையை அச்சுறுத்துகின்றன.			
2.	Low and unpredictable income creates financial insecurity. குறைந்த மற்றும் கணிக்க முடியாத வருமானம் நிதி பாதுகாப்பின்மையை உருவாக்குகிறது.			
3.	Rising raw materials cost poses challenge to continue handloom weaving profession. அதிகரித்து வரும் மூலப்பொருட்களின் விலை கைத்தறி நெசவுத் தொழிலைத் தொடர்வதற்கு சவாலாக உள்ளது.			
4.	Unfair pricing and middlemen reduce the profits earned from handloom products. நியாயமற்ற விலை நிர்ணயம் மற்றும் இடைத்தரகர்கள் கைத்தறி பொருட்களிலிருந்து கிடைக்கும் லாபத்தைக் குறைக்கின்றனர்.			
5.	Limited direct market access reduces the product recommended price. நேரடி சந்தை அணுகல் குறைவாக இருப்பதால், பரிந்துரைக்கப்பட்ட பொருளின் விலை குறைகிறது.			
6.	Lack of awareness and bureaucratic barriers prevent access to government schemes. விழிப்புணர்வு இல்லாமையும் அதிகாரத்துவ தடைகளும் அரசாங்கத் திட்டங்கள் பெறுவதைத் தடுக்கின்றன.			
7.	Seasonal demands and fluctuations in the product sales lead to financial disorders. பருவகால தேவைகள் மற்றும் தயாரிப்பு விற்பனையில் ஏற்படும் ஏற்ற இறக்கங்கள் நிதி நெருக்கடிக்கு வழிவகுக்கிறது.			
8.	Continuous treading during handloom weaving leads to musculo skeletal disorder. கைத்தறி நெசவு செய்யும் போது தொடர்ந்து காலால் அசைப்பது தசைநார் கோளாறுக்கு வழிவகுக்கிறது.			
9.	Limited access to bank loans restricts weavers from investing in quality raw materials and equipment. மலிவு விலையில் கடன் கிடைப்பது குறைவாக இருப்பதால், சிறந்த பொருட்கள் மற்றும் உபகரணங்களில் முதலீடு செய்வது சவாலாக உள்ளது.			
10.	Lack of awareness on digital marketing reduce the product value. சரியான இணைய சந்தை குறித்த விழிப்புணர்வு இல்லாததால் தயாரிப்பு மதிப்பு குறைகிறது.			
	<b>Workplace Challenges</b>			
11.	Absence of standardized pricing leads to low earnings. தரப்படுத்தப்பட்ட விலை நிர்ணயம் இல்லாதது குறைந்த வருவாய்க்கு வழிவகுக்கிறது.			
12.	Rise in raw material costs make profit unsustainable. மூலப்பொருள் விலை உயர்வு லாபத்தை நிலைநிறுத்த முடியாததாகாக்குகிறது.			

13.	Inadequate ventilation in the workplace affects my breathing. வேலை இடத்தில் போதிய காற்றோட்டம் இல்லாததால் எனது சுவாசத்திற்கு பாதிப்பு ஏற்படுகிறது.			
14.	Lack of light and ventilation cause physical strain. வெளிச்ச பற்றாக்குறையும் காற்றோட்டம் இன்மையும் உடல் ரீதியான அழுத்தத்தை ஏற்படுத்துகிறது.			
15.	Natural dyes used in the weaving attracts the customers. நெசவில் பயன்படுத்தப்படும் இயற்கை சாயங்கள் வாடிக்கையாளர்களை ஈர்க்கின்றன.			
16.	Dust and fibers cause respiratory discomfort while weaving. நெசவாளர்களுக்காக க்காதார முகாம்கள் அல்லது மருத்துவ பரிசோதனைகள் அரிதாக நடத்தப்படுகின்றன.			
17.	Designs used in Chedi Putta sarees increase product sales. செட்டி புட்டா சேலைகள் தயாரிப்பில் பயன்படுத்தப்படும் வடிவமைப்புகள் உற்பத்தியை அதிகரிக்கும்.			
18.	Power looms and factory textiles reduce demand for handloom fabrics. விசைத்தறிகள் மற்றும் தொழிற்சாலை ஜவுளிகள் கைத்தறி துணிகளுக்கான தேவையைக் குறைக்கின்றன.			
19.	Limited market access forces weavers to depend on profit-taking intermediaries. வரையறுக்கப்பட்ட சந்தை அணுகல் நெசவாளர்களை லாபம் ஈட்டும் இடைத்தரகர்களைச் சார்ந்திருக்க கட்டாயப்படுத்துகிறது.			
20.	Bureaucratic challenges limit weavers' access to financial aid. அதிகாரத்துவ சவால்கள் நெசவாளர்களுக்கு நிதி உதவி கிடைப்பதை கட்டுப்படுத்துகின்றன.			
21.	Income instability discourages younger generations from pursuing the weaving profession. வருமான உறுதியற்ற தன்மை இளைய தலைமுறையினர் நெசவுத் தொழிலைத் தொடர் ஊக்கமிழக்கச் செய்கிறது.			
22.	Dust and fibers cause respiratory discomfort while weaving. தூசி மற்றும் நார் காரணமாக நெய்தல் செய்யும் போது சுவாச அசௌகரியம் ஏற்படுகிறது.			
23.	Women weavers get lower wages compared to men. ஆண்களை விட பெண் நெசவாளர்களுக்கு குறைந்த கூலி கிடைக்கிறது.			
24.	Climate change reduces fiber production, and water shortages affect dyeing. காலநிலை மாற்றம் நார் உற்பத்தியைக் குறைக்கிறது, மேலும் தண்ணீர் பற்றாக்குறை சாயமிடுதலை பாதிக்கிறது.			
25.	Financial aid shortage hinders investment in better materials. நிதி உதவி பற்றாக்குறை சிறந்த பொருட்களில் முதலீடு செய்வதைத் தடுக்கிறது.			
	<b>Social Dynamic</b>			
26.	Weaving is a traditional family- or community-based occupation. நெசவு என்பது ஒரு பாரம்பரிய குடும்பம் அல்லது சமூக அடிப்படையிலான தொழிலாகும்.			

27.	Women play a key role in weaving. நெசவுத் தொழிலில் பெண்கள் முக்கிய பங்கு வகிக்கிறார்கள்.			
28.	Lack of modernization drives youth away from weaving. நவீனமயமாக்கல் இல்லாததால் இளைஞர்கள் நெசவுத் தொழிலில் இருந்து விலகிச் செல்கின்றனர்.			
29.	Weavers in cooperatives share resources but struggle with fair profit distribution. கூட்டுறவு நிறுவனங்களில் உள்ள நெசவாளர்கள் வளங்களைப் பகிர்ந்து கொள்கிறார்கள், ஆனால் நியாயமான இலாப விநியோகத்தில் போராடுகிறார்கள்.			
30.	Limited market access forces weavers to depend on intermediaries, reducing earnings. சந்தை அணுகல் குறைவாக இருப்பதால், நெசவாளர்கள் இடைத்தரகர்களைச் சார்ந்திருக்க வேண்டிய கட்டாயம் ஏற்படுகிறது, இதனால் வருவாய் குறைகிறது.			
31.	Financial hardships drive weavers to urban jobs, reducing traditional weaving. நிதி நெருக்கடிகள் நெசவாளர்களை நகர்ப்புற வேலைகளுக்குத் தள்ளுகின்றன, இதனால் பாரம்பரிய நெசவுத் தொழில் குறைகிறது.			
32.	Limited education hinders innovation and modern weaving adaptation. வரையறுக்கப்பட்ட கல்வி புதுமை மற்றும் நவீன நெசவு தழுவலைத் தடுக்கிறது.			
33.	Lack of training contributes to the decline of traditional weaving. பயிற்சியின்மை பாரம்பரிய நெசவின் வீழ்ச்சிக்கு காரணமாகிறது.			
34.	Market demand and fewer weavers dilute product quality. சந்தை தேவையும், நெசவாளர்களின் எண்ணிக்கையும் குறைவதால் தயாரிப்பு தரம் குறைகிறது.			
35.	Collaboration with designers boosts handloom demand and revenue. வடிவமைப்பாளர்களுடனான ஒத்துழைப்பு கைத்தறி தேவை மற்றும் வருவாயை அதிகரிக்கிறது.			

WORKPLACE WELLNESS

S.No	Statement	Agree	Neutral	Disagree
	<b>Physical Well-being</b>			
1.	Weaving improves my quality of life. நெசவு என் வாழ்க்கைத் தரத்தை மேம்படுத்துகிறது.			
2.	Poor lighting cause eye strain and vision issues. மோசமான வெளிச்சம் கண் அழுத்தத்தையும் பார்வை பிரச்சினைகளையும் ஏற்படுத்தும்.			
3.	Inhalation of cotton and silk fibers may lead to lung diseases over time. பருத்தி மற்றும் பட்டு இழைகளை சுவாசிப்பது காலப்போக்கில் நுரையீரல் நோய்களுக்கு வழிவகுக்கும்.			
4.	Poor workplace ergonomics result in posture-related health issues. மோசமான பணியிட பணிச்சூழலியல் தோரணை தொடர்பான உடல்நலப் பிரச்சினைகளை ஏற்படுத்துகிறது.			
5.	Chemical dyes and fibers cause skin allergies ரசாயன சாயங்கள் மற்றும் இழைகள் தோல் ஒவ்வாமையை ஏற்படுத்துகின்றன.			
6.	My nutritional intake is insufficient to maintain good health. எனது ஊட்டச்சத்து உணவுப் பழக்கம் நல்ல ஆரோக்கியத்தை பேணுவதற்கு போதுமானதாக இல்லை.			
7.	Traditional loom use causes shoulder pain. பாரம்பரிய நெசவியல் இயந்திரம் பயன்படுத்துதல் தோள்பட்டை வலியை ஏற்படுத்துகின்றன.			
8.	Handloom weaving enhances hand dexterity and promotes physical activity. கைத்தறி நெய்தல் கைகளின் நுட்பத்திறனை மேம்படுத்தி, உடல் இயக்கத்தை ஊக்குவிக்கிறது.			
9.	Lack of health and safety awareness raises occupational risks. சுகாதாரம் மற்றும் பாதுகாப்பு விழிப்புணர்வு இல்லாதது தொழில்சார் அபாயங்களை அதிகரிக்கின்றன.			
10.	Occupational health awareness is lacking among weavers. தொழில்சார் சுகாதார விழிப்புணர்வு நெசவாளர்களிடம் குறைவாக உள்ளது.			
11.	Prolonged sitting and repetitive movements lead to varicose veins. நீண்ட நேரம் உக்காந்திருப்பது மற்றும் ஒரே மாதிரியான இயக்கங்கள் விரிகுள சீரை நோய்க்கு வழிவகுக்கும்.			
12.	Long hours and few breaks during work lead to fatigue and physical stress. நீண்ட நேரம் ஓய்வு இல்லாமல் வேலை செய்வது சோர்வையும் உடல் அழுத்தத்தையும் ஏற்படுத்துகின்றது.			
13.	Skipping meals during continuous work impairs nutrition and immunity.			

	தொடர்ச்சியான வேலைக்கிடையில் உணவை தவிர்ப்பது, ஊட்டச்சத்து மற்றும் நோய் எதிர்ப்பு சக்தியை பாதிக்கிறது.			
14.	Poor workplace sanitation affects my well-being. மோசமான பணியிட சுகாதாரம் என் நல்வாழ்வை பாதிக்கிறது.			
15.	Financial stress harms mental and physical health. நிதி நெருக்கடி மன மற்றும் உடல் ஆரோக்கியத்தைப் பாதிக்கிறது.			
	<b>Emotional Well-being</b>			
16.	Weaving continuously brings me joy and fulfillment. தொடர்ந்து நெய்தல் எனக்கு மகிழ்ச்சியும் நிறைவையும் அளிக்கிறது			
17.	The repetitive nature of weaving causes discomfort in my muscles and joints. நெய்தலின் மீள்மீளும் இயல்பு எனது தசைகள் மற்றும் மூட்டுகளில் அசௌகரியத்தை ஏற்படுத்துகிறது.			
18.	I feel delighted when customers recognize and value our work. வாடிக்கையாளர்கள் எங்கள் வேலையை அங்கீகரித்து மதிக்கும்போது நான் மகிழ்ச்சியடைகிறேன்.			
19.	Irregular income and low wages create constant financial anxiety. ஒழுங்கற்ற வருமானமும் குறைந்த ஊதியமும் நிலையான நிதி பதட்டத்தை உருவாக்குகின்றன.			
20.	Growth of machine-made textiles impacts traditional handloom weaving. இயந்திரத்தால் தயாரிக்கப்பட்ட ஜவுளிகளின் வளர்ச்சி பாரம்பரிய கைத்தறி நெசவைப் பாதிக்கிறது.			
21.	Lack of recognition for my weaving skills lowers my self-confidence. எனது நெய்தல் திறமைகள் அங்கீகாரம் பெறாததால், எனது தன்னம்பிக்கை குறைகிறது.			
22.	High production demands and tight deadlines lead to mental exhaustion. அதிக உற்பத்தித் தேவைகள் மற்றும் இறுக்கமான காலக்கெடு மன சோர்வுக்கு வழிவகுக்கிறது.			
23.	Lack of recognition for craftsmanship fosters a sense of undervaluation. கைவினைத்திறனுக்கான அங்கீகாரம் இல்லாதது குறைத்து மதிப்பிடும் உணர்வை வளர்க்கிறது.			
24.	The low social perception of weaving affects my self-esteem. நெசவு பற்றிய குறைந்த சமூக கருத்து எனது சுயமரியாதையைப் பாதிக்கிறது.			
25.	Elder weavers suffer as youth abandon the weaving profession. இளைஞர்கள் நெசவுத் தொழிலைக் கைவிடுவதால் மூத்த நெசவாளர்கள் பாதிக்கப்படுகின்றனர்.			
26.	Lack of mental health awareness and support groups increases emotional strain. மனநல விழிப்புணர்வு மற்றும் ஆதரவு குழுக்கள் இல்லாதது உணர்ச்சி அழுத்தத்தை அதிகரிக்கிறது			

27.	Excessive workload leaves me emotionally drained. அதிக பணிச்சுமை எனது மனஅழுத்தத்தை அதிகரித்து. உணர்ச்சிப் பூர்வமாக சோர்வடையச் செய்கிறது.		
28.	Long hours of solitary work contribute to loneliness and mental fatigue. நீண்ட நேரம் தனிமையில் வேலை செய்வது தனிமை மற்றும் மன சோர்வுக்கு பங்களிக்கிறது.		
29.	Fear of losing cultural heritage and traditional skills creates emotional distress. கலாச்சார பாரம்பரியத்தையும் பாரம்பரிய நிறைகளையும் இழந்துவிடுவோமோ என்ற பயம் உணர்ச்சி ரீதியான துயரத்தை உருவாக்குகிறது.		
30.	Relying on middlemen for marketing leads to exploitation. சந்தைப்படுத்துதலுக்கு இடைத்தரகர்களை நம்பியிருப்பது சுரண்டலுக்கு வழிவகுக்கிறது.		
	<b>Organizational Well-being</b>		
31.	Lack of structured wage policies results in inconsistent earnings. கட்டமைக்கப்பட்ட ஊதியக் கொள்கைகள் இல்லாததால் சீரற்ற வருவாய் ஏற்படுகிறது.		
32.	Lack of modern infrastructure reduces efficiency and productivity. நவீன உள்கட்டமைப்பு இல்லாததால் செயல்திறன் மற்றும் உற்பத்தித்திறன் குறைகிறது.		
33.	Inadequate training programs slow skill development and innovation. போதுமான பயிற்சித் திட்டங்கள் இல்லாததால் நிறன் மேம்பாடு மற்றும் புதுமை மெதுவாகிறது.		
34.	Weak labour unions reduce bargaining power for fair wages and benefits. பலவீனமான தொழிலாளர் சங்கங்கள் நியாயமான ஊதியங்கள் மற்றும் சலுகைகளுக்கான பேரம் பேசும் சக்தியைக் குறைக்கின்றன.		
35.	Poor market linkages hinder direct sales and fair pricing. மோசமான சந்தை இணைப்புகள் நேரடி விற்பனை மற்றும் நியாயமான விலை நிர்ணயத்தைத் தடுக்கின்றன.		
36.	Unorganized supply chains lead to delays and material shortages. ஒழுங்கமைக்கப்படாத விநியோகச் சங்கிலிகள் தாமதங்களுக்கும் பொருள் பற்றாக்குறைக்கும் வழிவகுக்கும்.		
37.	Limited access to financial aid restricts business growth. நிதி உதவிக்கான வரம்புக்குட்பட்ட அணுகல் வணிக வளர்ச்சியைக் கட்டுப்படுத்துகிறது.		
38.	Insufficient collaboration with designers and brands limits creative expansion. வடிவமைப்பாளர்கள் மற்றும் பிராண்டுகளுடன் போதுமான ஒத்துழைப்பு இல்லாதது படைப்பு விரிவாக்கத்தைக் கட்டுப்படுத்துகிறது.		
39.	Lack of awareness about sustainable practices reduces eco-friendly production opportunities. நிலையான நடைமுறைகள் பற்றிய விழிப்புணர்வு இல்லாததால் சுற்றுச்சூழலுக்கு உகந்த உற்பத்தி வாய்ப்புகள் குறைகின்றன.		

40.	Inconsistent raw material quality affects product standards. மூலப்பொருட்களின் தரம் சீரற்றதாக இருந்தால், அது தயாரிப்பு தரத்தைப் பாதிக்கிறது.			
41.	Difficulty in obtaining certification and quality standards affects global exports. சான்றிதழ் மற்றும் தரத் தரங்களைப் பெறுவதில் உள்ள சிரமம் உலகளாவிய ஏற்றுமதிகளைப் பாதிக்கிறது.			
42.	Unstable power supply disrupts weaving processes and reduces output efficiency. நிலையற்ற மின்சாரம் நெசவு செயல்முறைகளை சீர்குலைத்து வெளியீட்டு செயல்திறனைக் குறைக்கிறது.			
43.	Absence of formal contracts leaves weavers vulnerable to exploitation. முறையான ஒப்பந்தங்கள் இல்லாததால் நெசவாளர்கள் சுரண்டலுக்கு ஆளாக நேர்டுகிறது.			
44.	Limited digital presence affects market reach and global competitiveness. வரையறுக்கப்பட்ட இணைய இருப்பு சந்தை உலகளாவிய அணுகலையும் போட்டித்தன்மையையும் பாதிக்கிறது.			

## FINAL TOOL

### TITLE OF THE PROJECT

### **ECONOMIC HARDSHIP AND WORKPLACE WELLNESS AMONG HANDLOOM WEAVERS**

Name of the Institution: St. Ignatius College of Education (Autonomous)  
Palayamkottai, Tirunelveli- 627 002

அன்பார்ந்த நெசவாளர்களே,

எங்களது ஆராய்ச்சி தொடர்பாக உங்களிடமிருந்து சில விவரங்கள் தேவைப்படுகின்றன. அவற்றை உரிய வகையில் அளித்து உதவும்படி கேட்டுக் கொள்கிறோம். இவை ரகசியமாகப் பாதுகாக்கப்பட்டு எங்களுடைய ஆராய்ச்சிக்கு மட்டும் பயன்படுத்தப்படும் என உறுதி அளிக்கிறோம்.

தங்கள் நன்றியுள்ள,  
ஆராய்ச்சியாளர்கள்

**PERSONAL INFORMATION**

Please read each statement carefully and tick (✓) your most appropriate choice. Answer all statements, and your answers will be kept confidential and will be used only for research purposes.

- |   |  |   |   |
|---|--|---|---|
| <input type="checkbox"/> பாலினம்<br><input type="checkbox"/> Gender | <input type="checkbox"/> ஆண்<br><input type="checkbox"/> Male                          | <input type="checkbox"/> பெண்<br><input type="checkbox"/> Female                            |   |
| வசிக்கும் இடம்<br>Place of Residence                                | <input type="checkbox"/> கிராமம்<br><input type="checkbox"/> Rural                     | <input type="checkbox"/> புறநகர் பகுதி<br><input type="checkbox"/> Semi-Urban               |   |
| குடும்ப வகை<br>Type of Family                                       | <input type="checkbox"/> கூட்டுக்குடும்பம்<br><input type="checkbox"/> Joint Family    | <input type="checkbox"/> தனிக்குடும்பம்<br><input type="checkbox"/> Nuclear Family          |   |
| வீட்டுவசதியின் தன்மை<br>Nature of Housing                           | <input type="checkbox"/> சொந்த வீடு<br><input type="checkbox"/> Owned house            | <input type="checkbox"/> வாடகை வீடு<br><input type="checkbox"/> Rented House                |   |
| Member in the handloom weavers Association                          | <input type="checkbox"/> ஆம்<br><input type="checkbox"/> Yes                           | <input type="checkbox"/> இல்லை<br><input type="checkbox"/> No                               |   |
| கைத்தறி நெசவாளர் சங்கத்தில் உறுப்பினர் பணி நேரம்<br>Working Hours   | <input type="checkbox"/> 5-10 மணி நேரம்<br><input type="checkbox"/> 5-10 hours         | <input type="checkbox"/> 10 மணி நேரத்திற்கு மேல்<br><input type="checkbox"/> Above 10 hours |   |
| வங்கி கடன் பெற்றுள்ளேன்<br>Availed a Bank Loan                      | <input type="checkbox"/> ஆம்<br><input type="checkbox"/> Yes                           | <input type="checkbox"/> இல்லை<br><input type="checkbox"/> No                               |   |
| தொழில்நுட்ப பயன்பாடு<br>Use of Technology                           | <input type="checkbox"/> ஆம்<br><input type="checkbox"/> Yes                           | <input type="checkbox"/> இல்லை<br><input type="checkbox"/> No                               |   |
| திருமண நிலை<br>Marital Status                                       | <input type="checkbox"/> திருமணமாகாதவர்<br><input type="checkbox"/> Single             | <input type="checkbox"/> திருமணமானவர்<br><input type="checkbox"/> Married                   |   |
| கல்வித் தகுதி<br>Educational Qualification                          | <input type="checkbox"/> படிக்காதவர்<br><input type="checkbox"/> Uneducated            | <input type="checkbox"/> பள்ளி நிலை<br><input type="checkbox"/> School Level                | <input type="checkbox"/> கல்லூரி நிலை<br><input type="checkbox"/> College Level               |
| வேலைவாய்ப்பின் வகை<br>Type of Employment                            | <input type="checkbox"/> நிரந்தர வேலை<br><input type="checkbox"/> Permanent Employment | <input type="checkbox"/> தற்காலிக வேலை<br><input type="checkbox"/> Temporary Employment     | <input type="checkbox"/> ஒப்பந்த வேலை<br><input type="checkbox"/> Contractual Employment      |
| பணி அனுபவம்<br>Years of Experience                                  | <input type="checkbox"/> 0-5 வருடங்கள்<br><input type="checkbox"/> 0-5 Years           | <input type="checkbox"/> 5-10 வருடங்கள்<br><input type="checkbox"/> 5-10 Years              | <input type="checkbox"/> 10 வருடங்களுக்கு மேல்<br><input type="checkbox"/> 10 Years and Above |

ECONOMIC HARDSHIPS

S.No	Statement	Agree	Neutral	Disagree
	<b>Financial Struggles</b>			
1.	Financial challenges threaten my economic stability. நிதி சவால்கள் எனது பொருளாதார நிலையற்றத்தன்மையை அச்சுறுத்துகின்றன.			
2.	Low and unpredictable income creates financial insecurity. குறைந்த மற்றும் கணிக்க முடியாத வருமானம் நிதி பாதுகாப்பின்மையை உருவாக்குகிறது.			
3.	Rising raw materials cost poses challenge to continue handloom weaving profession. அதிகரித்து வரும் மூலப்பொருட்களின் விலை கைத்தறி நெசவுத் தொழிலைத் தொடர்வதற்கு சவாலாக உள்ளது.			
4.	Unfair pricing and middlemen reduce the profits earned from handloom products. நியாயமற்ற விலை நிர்ணயம் மற்றும் இடைத்தரகர்கள் கைத்தறி பொருட்களிலிருந்து கிடைக்கும் லாபத்தைக் குறைக்கின்றனர்.			
5.	Limited direct market access reduces the product recommended price. நேரடி சந்தை அணுகல் குறைவாக இருப்பதால், பரிந்துரைக்கப்பட்ட பொருளின் விலை குறைகிறது.			
6.	Lack of awareness and bureaucratic barriers prevent access to government schemes. விழிப்புணர்வு இல்லாமையும் அதிகாரத்துவ தடைகளும் அரசாங்கத் திட்டங்கள் பெறுவதைத் தடுக்கின்றன.			
7.	Seasonal demands and fluctuations in the product sales lead to financial disorders. பருவகால தேவைகள் மற்றும் தயாரிப்பு விற்பனையில் ஏற்படும் ஏற்ற இறக்கங்கள் நிதி நெருக்கடிக்கு வழிவகுக்கிறது.			
8.	Continuous treadling during handloom weaving leads to musculo skeletal disorder. கைத்தறி நெசவு செய்யும் போது தொடர்ந்து காலால் அசைப்பது தசைநார் கோளாறுக்கு வழிவகுக்கிறது.			
9.	Limited access to bank loans restricts weavers from investing in quality raw materials and equipment. மலிவு விலையில் கடன் கிடைப்பது குறைவாக இருப்பதால், சிறந்த பொருட்கள் மற்றும் உபகரணங்களில் முதலீடு செய்வது சவாலாக உள்ளது.			
10.	Lack of awareness on digital marketing reduce the product value. சரியான இணைய சந்தை குறித்த விழிப்புணர்வு இல்லாததால் தயாரிப்பு மதிப்பு குறைகிறது.			
	<b>Workplace Challenges</b>			
11.	Absence of standardized pricing leads to low earnings. தரப்படுத்தப்பட்ட விலை நிர்ணயம் இல்லாதது குறைந்த வருவாய்க்கு வழிவகுக்கிறது.			
12.	Rise in raw material costs make profit unsustainable. மூலப்பொருள் விலை உயர்வு லாபத்தை நிலைநிறுத்த முடியாததாக்குகிறது.			

13.	Lack of light and ventilation cause physical strain. வெளிச்ச பற்றாக்குறையும் காற்றோட்டம் இன்மையும் உடல் ரீதியான அழுத்தத்தை ஏற்படுத்துகிறது.			
14.	Natural dyes used in the weaving attracts the customers. நெசவில் பயன்படுத்தப்படும் இயற்கை சாயங்கள் வாடிக்கையாளர்களை ஈர்க்கின்றன.			
15.	Designs used in Chedi Putta sarees increase product sales. செட்டி புட்டா சேலைகள் தயாரிப்பில் பயன்படுத்தப்படும் வடிவமைப்புகள் உற்பத்தியை அதிகரிக்கும்.			
16.	Power looms and factory textiles reduce demand for handloom fabrics. விசைத்தறிகள் மற்றும் தொழிற்சாலை ஜவுளிகள் கைத்தறி துணிகளுக்கான தேவையைக் குறைக்கின்றன.			
17.	Limited market access forces weavers to depend on profit-taking intermediaries. வரையறுக்கப்பட்ட சந்தை அணுகல் நெசவாளர்களை லாபம் ஈட்டும் இடைத்தரகர்களைச் சார்ந்திருக்க கட்டாயப்படுத்துகிறது.			
18.	Bureaucratic challenges limit weavers' access to financial aid. அதிகாரத்துவ சவால்கள் நெசவாளர்களுக்கு நிதி உதவி கிடைப்பதை கட்டுப்படுத்துகின்றன.			
19.	Income instability discourages younger generations from pursuing the weaving profession. வருமான உறுதியற்ற தன்மை இளைய தலைமுறையினர் நெசவுத் தொழிலைத் தொடர ஊக்கமிழக்கச் செய்கிறது.			
20.	Women weavers get lower wages compared to men. ஆண்களை விட பெண் நெசவாளர்களுக்கு குறைந்த கூலி கிடைக்கிறது.			
21.	Climate change reduces fiber production, and water shortages affect dyeing. காலநிலை மாற்றம் நார் உற்பத்தியைக் குறைக்கிறது, மேலும் தண்ணீர் பற்றாக்குறை சாயமிடுதலை பாதிக்கிறது.			
22.	Financial aid shortage hinders investment in better materials. நிதி உதவி பற்றாக்குறை சிறந்த பொருட்களில் முதலீடு செய்வதைத் தடுக்கிறது.			
<b>Social Dynamic</b>				
23.	Weaving is a traditional family- or community-based occupation. நெசவு என்பது ஒரு பாரம்பரிய குடும்பம் அல்லது சமூக அடிப்படையிலான தொழிலாகும்.			
24.	Women play a key role in weaving. நெசவுத் தொழிலில் பெண்கள் முக்கிய பங்கு வகிக்கிறார்கள்.			
25.	Lack of modernization drives youth away from weaving. நவீனமயமாக்கல் இல்லாததால் இளைஞர்கள் நெசவுத் தொழிலில் இருந்து விலகிச் செல்கின்றனர்.			

26.	Weavers in cooperatives share resources but struggle with fair profit distribution. கூட்டுறவு நிறுவனங்களில் உள்ள நெசவாளர்கள் வளங்களைப் பகிர்ந்து கொள்கிறார்கள், ஆனால் நியாயமான இலாப விநியோகத்தில் போராடுகிறார்கள்.			
27.	Limited market access forces weavers to depend on intermediaries, reducing earnings. சந்தை அணுகல் குறைவாக இருப்பதால், நெசவாளர்கள் இடைத்தரகர்களைச் சார்ந்திருக்க வேண்டிய கட்டாயம் ஏற்படுகிறது, இதனால் வருவாய் குறைகிறது.			
28.	Financial hardships drive weavers to urban jobs, reducing traditional weaving. நிதி நெருக்கடிகள் நெசவாளர்களை நகர்ப்புற வேலைகளுக்குத் தள்ளுகின்றன, இதனால் பாரம்பரிய நெசவுத் தொழில் குறைகிறது.			
29.	Limited education hinders innovation and modern weaving adaptation. வரையறுக்கப்பட்ட கல்வி புதுமை மற்றும் நவீன நெசவு தழுவலைத் தடுக்கிறது.			
30.	Lack of training contributes to the decline of traditional weaving. பயிற்சியின்மை பாரம்பரிய நெசவின் வீழ்ச்சிக்கு காரணமாகிறது.			
31.	Market demand and fewer weavers dilute product quality. சந்தை தேவையும், நெசவாளர்களின் எண்ணிக்கையும் குறைவதால் தயாரிப்பு தரம் குறைகிறது.			
32.	Collaboration with designers boosts handloom demand and revenue. வடிவமைப்பாளர்களுடனான ஒத்துழைப்பு கைத்தறி தேவை மற்றும் வருவாயை அதிகரிக்கிறது.			

WORKPLACE WELLNESS

S.No	Statement	Agree	Neutral	Disagree
	<b>Physical Well-being</b>			
1.	Weaving improves my quality of life. நெசவு என் வாழ்க்கைத் தரத்தை மேம்படுத்துகிறது.			
2.	Poor lighting cause eye strain and vision issues. மோசமான வெளிச்சம் கண் அழுத்தத்தையும் பார்வை பிரச்சினைகளையும் ஏற்படுத்தும்.			
3.	Inhalation of cotton and silk fibers may lead to lung diseases over time. பருத்தி மற்றும் பட்டு இழைகளை சுவாசிப்பது காலப்போக்கில் நுரையீரல் நோய்களுக்கு வழிவகுக்கும்.			
4.	Poor workplace ergonomics result in posture-related health issues. மோசமான பணியிட பணிக்குழுவியல் தோரணை தொடர்பான உடல்நலப் பிரச்சினைகளை ஏற்படுத்துகிறது.			
5.	Chemical dyes and fibers cause skin allergies ரசாயன சாயங்கள் மற்றும் இழைகள் தோல் ஒவ்வாமையை ஏற்படுத்துகின்றன.			
6.	Traditional loom use causes shoulder pain. பாரம்பரிய நெசவியல் இயந்திரம் பயன்படுத்துதல் தோள்பட்டை வலியை ஏற்படுத்துகின்றன.			
7.	Handloom weaving enhances hand dexterity and promotes physical activity. கைத்தறி நெய்தல் கைகளின் நுட்பத்திறனை மேம்படுத்தி, உடல் இயக்கத்தை ஊக்குவிக்கிறது.			
8.	Lack of health and safety awareness raises occupational risks. சுகாதாரம் மற்றும் பாதுகாப்பு விழிப்புணர்வு இல்லாதது தொழில்சார் அபாயங்களை அதிகரிக்கின்றன.			
9.	Prolonged sitting and repetitive movements lead to varicose veins. நீண்ட நேரம் உக்காந்திருப்பது மற்றும் ஒரே மாதிரியான இயக்கங்கள் விரிசுருள் சீரை நோய்க்கு வழிவகுக்கும்.			
10.	Long hours and few breaks during work lead to fatigue and physical stress. நீண்ட நேரம் ஓய்வு இல்லாமல் வேலை செய்வது சோர்வையும் உடல் அழுத்தத்தையும் ஏற்படுத்துகின்றது.			
11.	Skipping meals during continuous work impairs nutrition and immunity. தொடர்ச்சியான வேலைக்கிடையில் உணவை தவிர்ப்பது, ஊட்டச்சத்து மற்றும் நோய் எதிர்ப்பு சக்தியை பாதிக்கிறது.			
12.	Poor workplace sanitation affects my well-being. மோசமான பணியிட சுகாதாரம் என் நல்வாழ்வை பாதிக்கிறது.			

13.	Financial stress harms mental and physical health. நிதி நெருக்கடி மன மற்றும் உடல் ஆரோக்கியத்தைப் பாதிக்கிறது.			
	<b>Emotional Well-being</b>			
14.	Weaving continuously brings me joy and fulfillment. தொடர்ந்து நெய்தல் எனக்கு மகிழ்ச்சியும் நிறைவையும் அளிக்கிறது			
15.	I feel delighted when customers recognize and value our work. வாடிக்கையாளர்கள் எங்கள் வேலையை அங்கீகரித்து மதிக்கும்போது நான் மகிழ்ச்சியடைகிறேன்.			
16.	Irregular income and low wages create constant financial anxiety. ஒழுங்கற்ற வருமானமும் குறைந்த ஊதியமும் நிலையான நிதி பதட்டத்தை உருவாக்குகின்றன.			
17.	Growth of machine-made textiles impacts traditional handloom weaving. இயந்திரத்தால் தயாரிக்கப்பட்ட ஜவுளிகளின் வளர்ச்சி பாரம்பரிய கைத்தறி நெசவைப் பாதிக்கிறது.			
18.	High production demands and tight deadlines lead to mental exhaustion. அதிக உற்பத்தித் தேவைகள் மற்றும் இறுக்கமான காலக்கெடு மன சோர்வுக்கு வழிவகுக்கிறது.			
19.	Lack of recognition for craftsmanship fosters a sense of undervaluation. கைவினைத்திறனுக்கான அங்கீகாரம் இல்லாதது குறைத்து மதிப்பிடும் உணர்வை வளர்க்கிறது.			
20.	The low social perception of weaving affects my self-esteem. நெசவு பற்றிய குறைந்த சமூகக் கருத்து எனது சுயமரியாதையைப் பாதிக்கிறது.			
21.	Elder weavers suffer as youth abandon the weaving profession. இளைஞர்கள் நெசவுத் தொழிலைக் கைவிடுவதால் மூத்த நெசவாளர்கள் பாதிக்கப்படுகின்றனர்.			
22.	Lack of mental health awareness and support groups increases emotional strain. மனநல விழிப்புணர்வு மற்றும் ஆதரவு குழுக்கள் இல்லாதது உணர்ச்சி அழுத்தத்தை அதிகரிக்கிறது			
23.	Long hours of solitary work contribute to loneliness and mental fatigue. நீண்ட நேரம் தனிமையில் வேலை செய்வது தனிமை மற்றும் மன சோர்வுக்கு பங்களிக்கிறது.			
24.	Fear of losing cultural heritage and traditional skills creates emotional distress. கலாச்சார பாரம்பரியத்தையும் பாரம்பரிய திறன்களையும் இழந்துவிடுவோமோ என்ற பயம் உணர்ச்சி ரீதியான துயரத்தை உருவாக்குகிறது.			
25.	Relying on middlemen for marketing leads to exploitation. சந்தைப்படுத்துதலுக்கு இடைத்தரகர்களை நம்பியிருப்பது சுரண்டலுக்கு வழிவகுக்கிறது.			

	<b>Organizational Well-being</b>			
26.	Lack of structured wage policies results in inconsistent earnings. கட்டமைக்கப்பட்ட ஊதியக் கொள்கைகள் இல்லாததால் சீரற்ற வருவாய் ஏற்படுகிறது.			
27.	Lack of modern infrastructure reduces efficiency and productivity. நவீன உட்கட்டமைப்பு இல்லாததால் செயல்திறன் மற்றும் உற்பத்தித்திறன் குறைகிறது.			
28.	Inadequate training programs slow skill development and innovation. போதுமான பயிற்சித் திட்டங்கள் இல்லாததால் திறன் மேம்பாடு மற்றும் புதுமை மெதுவாகிறது.			
29.	Weak labour unions reduce bargaining power for fair wages and benefits. பலவீனமான தொழிலாளர் சங்கங்கள் நியாயமான ஊதியங்கள் மற்றும் சலுகைகளுக்கான பேரம் பேசும் சக்தியைக் குறைக்கின்றன.			
30.	Poor market linkages hinder direct sales and fair pricing. மோசமான சந்தை இணைப்புகள் நேரடி விற்பனை மற்றும் நியாயமான விலை நிர்ணயத்தைத் தடுக்கின்றன.			
31.	Unorganized supply chains lead to delays and material shortages. ஒழுங்கமைக்கப்படாத விநியோகச் சங்கிலிகள் தாமதங்களுக்கும் பொருள் பற்றாக்குறைக்கும் வழிவகுக்கும்.			
32.	Limited access to financial aid restricts business growth. நிதி உதவிக்கான வரம்புக்குட்பட்ட அணுகல் வணிக வளர்ச்சியைக் கட்டுப்படுத்துகிறது.			
33.	Insufficient collaboration with designers and brands limits creative expansion. வடிவமைப்பாளர்கள் மற்றும் பிராண்டுகளுடன் போதுமான ஒத்துழைப்பு இல்லாதது படைப்பு விரிவாக்கத்தைக் கட்டுப்படுத்துகிறது.			
34.	Lack of awareness about sustainable practices reduces eco-friendly production opportunities. நிலையான நடைமுறைகள் பற்றிய விழிப்புணர்வு இல்லாததால் சுற்றுச்சூழலுக்கு உகந்த உற்பத்தி வாய்ப்புகள் குறைகின்றன.			
35.	Inconsistent raw material quality affects product standards. மூலப்பொருட்களின் தரம் சீரற்றதாக இருந்தால், அது தயாரிப்பு தரத்தைப் பாதிக்கிறது.			
36.	Difficulty in obtaining certification and quality standards affects global exports. சான்றிதழ் மற்றும் தரத் தரங்களைப் பெறுவதில் உள்ள சிரமம் உலகளாவிய ஏற்றுமதிகளைப் பாதிக்கிறது.			

37.	Unstable power supply disrupts weaving processes and reduces output efficiency. நிலையற்ற மின்சாரம் நெசவு செயல்முறைகளை சீர்குலைத்து வெளியீட்டு செயல்திறனைக் குறைக்கிறது.			
38.	Absence of formal contracts leaves weavers vulnerable to exploitation. முறையான ஒப்பந்தங்கள் இல்லாததால் நெசவாளர்கள் சுரண்டலுக்கு ஆளாக நேரிடுகிறது.			
39.	Limited digital presence affects market reach and global competitiveness. வரையறுக்கப்பட்ட இணைய இருப்பு சந்தை உலகளாவிய அணுகலையும் போட்டித்தன்மையையும் பாதிக்கிறது.			

## **ECONOMIC HARDSHIPS AND WORKPLACE WELLNESS AMONG HANDLOOM WEAVERS**

Handloom weavers face significant economic hardships due to low wages, fluctuating market demand, and competition from mass-produced textiles. Many struggle with financial instability, leading to poor living conditions and high stress levels. Additionally, the absence of structured workplace wellness programs exacerbates health issues like back pain, eye strain, and respiratory problems caused by prolonged work hours and poor ventilation. To improve their well-being, initiatives such as fair wages, healthcare support, and ergonomic workspaces are essential. Promoting sustainable practices and direct market access can also help uplift their economic conditions while preserving this traditional craft.



## PHOTO GALLERY

*Veeravanallur Velanguli, Puthukudiruppu, and Mormadam*













