A study on health issues of leather industry workers

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Abstract. Leather manufacturing company workers faced so many health issues. This study explores to investigate the health issues faced by workers in a leather manufacturing company located in Vaniyambadi District. Through a comprehensive assessment of the workers' health, including surveys, interviews, and analysis of medical records, the study identifies the prevalent health concerns and explores potential contributing factors. The findings reveal that workers in the leather manufacturing company experience a range of health issues, with body ache, joint pain, and headache being the most common problems reported. Other health issues identified include teeth problems, irritation in feet, urinary tract discomfort, giddiness, eye irritation, chest irritation, stomach discomfort, and various other symptoms. The study assesses the work environment and job tasks to identify potential occupational health risks that may contribute to the observed health issues. Factors such as long working hours, exposure to hazardous substances, ergonomic challenges, and inadequate safety measures are examined. Based on the study findings, recommendations are provided to address the identified health issues. These include implementing ergonomic improvements, enhancing health and safety training programs, providing personal protective equipment, and fostering a culture of health and well-being within the organization. The results of this study contribute to the understanding of health issues among workers in the leather manufacturing industry, providing valuable insights for the company and relevant stakeholders to enhance occupational health and improve worker well-being.

1 Introduction

The health and well-being of workers in various industries are of great importance, and the leather manufacturing sector is no exception. The leather industry is known for its labor-intensive processes, involving tasks such as tanning, dyeing, cutting, and stitching. These processes often expose workers to a range of occupational hazards and potential health risks. [1]Factors such as prolonged exposure to chemicals, poor ergonomics, physical exertion, and inadequate safety measures can contribute to adverse health outcomes among the workforce.[2]

The objective of this study is to investigate and analyze the prevalent health issues among the workers of the leather manufacturing company. [3]By understanding the specific health challenges faced by these workers, appropriate interventions and preventive measures can be developed to improve their well-being.[4]

Primary data will be collected through surveys, interviews, and medical examinations of the workers. [5]This data will provide valuable insights into the workers' health status, work conditions, and potential risk factors.[6]

Ethical considerations will be given utmost importance to ensure the privacy and confidentiality of the participants. [7]Informed consent will be obtained, and all ethical guidelines and regulations will be strictly followed throughout the study.

The expected outcomes of this research include the identification and documentation of the common health issues prevalent among the workers of the leather manufacturing company. [8]Additionally, the study aims to highlight the occupational hazards and environmental factors that contribute to these health issues. By gaining a

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comprehensive understanding of the problem, [9]appropriate recommendations and interventions can be proposed to mitigate the risks and promote a healthier work environment.[10]

Overall, this study aims to contribute to the existing knowledge on health issues among workers in the leather manufacturing industry. [11]It aspires to provide insights and practical solutions for improving the health and well-being of the workforce in the specific company under investigation. [12]By addressing these issues, the aim is to create a safer and healthier work environment that fosters the overall welfare of the workers.

2 Review of literature

Raqeyah jawad najy(2023) As the principles of work study were applied to one of the industrial facilities, specifically in (the leather shoes the General Establishment for Leather Industries, this study of work has a direct relationship to productivity and is typically used to increase the amount of production with a limited amount of resources without resorting to additional investments. [13]eliminating bottlenecks while leaving the fundamental manufacturing processes in place.

Ifunre iriobe (2023) Industrial cluster development is centred on inter-firm cooperation. [14]Industrial clusters increase a region's production and competitiveness through corporate collaboration. According to earlier research, location, culture, company size, and age all have an impact on how businesses in various industries interact with one another. [15]This study was done to see if there were any variations in the impact of proximity on inter-firm cooperation in different types of leather. [16]The study was conducted using a survey research design. The fact that these clusters are not involved in the generation of scientific knowledge is one of the explanations put up for this.[17]

Lavanya. M (2021)This study looked into the stress levels and workers' mentalities. The sampling procedures involved 150 samples. [18]According to the investigation, stress has an impact on productivity. The majority of respondents reported high levels of stress, and the company showed little concern for its workers.[19]

Kathleen Mortimer et l, William R. Wise et l, Luai Jraisat et l, (2021) this study is to find trends and prospects for future research in the leather industry. [20]An extensive assessment of peer-reviewed journal articles on sustainability in the leather sector is conducted in order to achieve this. [21]The leather sector has seen a considerable increase in triple bottom line-related sustainability studies in the last four years compared to the previous 15 years put together, according to key results. The study's findings can help academics identify topics for further investigation and make it easier for industry management to comprehend the most important sustainability issues facing the leather sector.[22]

Kassu jilcha(2021)this study reveals that the problem of "Occupational Safety and Health Practises Challenges and Improvement Strategy in Tannery Industry" was the subject of the study paper.[23] The review's primary goal was to look into Ethiopia's leather industry's OSH. To gather crucial information, a thorough survey, planned interviews, and direct observation were used. Synthetics, working for long periods of time, sitting down while working, taking time off work, and crude stowaways and skins were inferred causes of disease.

Dhinesh Raj KS (2021) the goal of this study is to examine how non-industry workers are connected to the leather industry and the occupational health and safety of tanneries in the Vellore district of Tamil Nadu.

Arumugam vasumathi, P. ETAL (2021) they explain about the work life balance issue like work environment and family related factors. These both factors mentioning the following issues working conditions, work flexibility, work demands, working hours, travelling time, advancement of technology, family demands, demographic profile, time, energy, family conflicts, stress, tension, poor performance.

Thilagaraj.A,Dr agalya.v,(2021)in this study common public health challenges such as infection, malnutrition, and environmental health behavioral insufficient medical care. industrial development has recently caused problemsThis investigation has resolved the issues identified with the workers of cowhide ventures and consequences of the examination have been broke down.

Dhamodharan.v,Dr Agalya vishvanadhan(2021) the employees was the most threatening period for the Indian leather industries. This study observes the association between the employees and organization and the impact of job retention. Human resources management in practice the may possibly increase the level of employee retention in leather industries.

Umme habida bodrum naher. ETAL (2020) This study investigates the prevalence and health problem of workers. The male workers are suffering from health issues than the women. Problem like jaundice, nail rotten, chronic head ace, gastrointestinal, ophthalmologist, trauma, cardiovascular, hearing, pain in joints, frequent fever. And the polluted environment.

Golam Rabbani,Dr Baki billah(2020) The aim of this study was to investigate the associations of health complaints.occupational exposure to tannery chemicals with breathing difficulty and skin diseasesregular health surveillance, and worker and employer education are necessary for reducing these exposures and improving the health outcomes of the tannery workers.

Bathrinath sankarnarayanan,(2020) **t**his paper aims to identify, evaluate, and measure the ergonomic factors hampering the production of leather garment-based small and medium-sized enterprises (SMEs). Ergonomic problems faced by the workers largely impact the health of individuals and also the productivity of a firm. Based on experts' opinions and a literature survey.The findings of this study will assist industrial managers to enhance production rate and to progress towards social sustainability in Indian SMEs

Maryam shafahi. (2019)a result of the leather industry's contribution to water pollution, researchers predict that by 2025, the volume of industrial effluent will have doubled, resulting in an increase in contaminated freshwater assets. Benefits and high commitment to climate change per capita might be contrasted to successfully dissect the anticipated global market and poison reduction strategies. This report assesses the cowhide industry's cycle, water use, and contamination to gauge its scope and effects.Although it should be considered as a sector that offers model potential for advancing the economy, the environment, and technology due to its antiquated tanning method.

Shilpy Rani Basak,Dr Ismail raihan (2019)this paper based on occurred due to the unconsciousness of workers, mechanical problems and carelessness of owners respectively. Carelessness of owners respectively. To improve Occupational Health & Safety (OHS) situation in the industries in an effective way there should set some specific target for owners and workers. Needs to keep in good workplace; skilled, safe and healthy workers.

Shilpy Rani Bask*, Ismail Raihan, Abu Sayed Bhuiya(2019) This paper based on some practical working report of Re-Tie Bangladesh, UNIDO and finally some recommendations are provided for policy management in health and safety issues in industries. To improve Occupational Health & Safety (OHS) situation in the industries in an effective way there should set some specific target for owners and workers. The study finds out the minimum treatment expenses for an injured worker is 0.05 - 0.2 million BDT which is 9 to 36 times more than yearly expenses for PPE (Personal Protective Equipment) required for each worker.

3 Research gap

This research gap indicates a need for in-depth exploration and understanding of the health challenges faced by workers in this particular industry. There is a notable research gap specifically addressing the health issues faced by workers in the leather manufacturing industry. Bridging this research gap will not only contribute to the knowledge base on occupational health but also provide practical recommendations and interventions to improve the well-being of workers in the leather manufacturing company in the Vaniyambadi district. It will help identify specific areas for intervention, such as implementing proper safety protocols, ergonomic improvements, health awareness campaigns, and training programs tailored to the unique challenges faced by these workers. the research gap in understanding health issues among workers in the leather manufacturing industry, particularly within the specific company in the Vaniyambadi district, will lead to a more comprehensive understanding of the health risks faced by these workers and enable the development of targeted interventions to safeguard their well-being.

Statement of the Problem:

The workers employed in the leather manufacturing company in Vaniyambadi District may be vulnerable to various health issues due to their occupational exposure. This study aims to identify the specific health problems experienced by these workers and analyze the potential factors contributing to these health issues. By addressing the health concerns and risk factors, appropriate measures can be implemented to safeguard the workers' health and improve their overall working conditions.The leather manufacturing industry in Vaniyambadi District is a significant economic sector, but it poses potential health risks to its workers. The tanning process involved in leather production, specifically chrome tanning, generates a large amount of wastewater that is currently not effectively treated, leading to environmental pollution. Additionally, the exposure to chemicals and hazardous substances in the workplace may have adverse effects on the health and well-being of the workers.

Therefore, the problem to be addressed in this study is to assess and understand the specific health issues faced by the workers in the leather manufacturing company in Vaniyambadi District. This includes investigating the impact of occupational hazards, such as exposure to chemicals and waste products, on the workers' health, as well as examining the effectiveness of existing health and safety measures in place. The aim is to identify potential health risks, evaluate the adequacy of current safety protocols, and propose recommendations to mitigate and improve the health conditions and overall well-being of the workers in the leather manufacturing industry.

3.1 Objectives:

- To identify the Health Issues of workers

4 Scope of the study

The Present study has focused on the Vaniyambadi and specifically targeted questions related to the socio-economic profile of workers and major problems faced by workers alone are considered in the study. , a comprehensive understanding of the health issues among workers of a leather manufacturing company in the Vaniyambadi district can be achieved. The findings can inform evidence-based interventions, policy recommendations, and initiatives aimed at promoting a safer and healthier work environment for the workers.

5 Research methodology

Data required for the study has been collected through Interview Schedule. Questions pertain to profile of identify the health issues of faced in the workers access the employee's perception to working environment access the step taken by the management to reduce health issues.

6 DATA

The primary data are collected through a wellframed and structured questionnaire. The questionnaires were circulated hard copy to the respondents. By using an interview schedule, you can ensure consistency in the questions asked and obtain standardized responses, making the data collection process more reliable.

6.1 Sampling and Sample Size

Convenient sampling can be a useful approach when it is difficult to access or reach the entire population of interest. It allows researchers to collect data quickly and easily from individuals who are readily available or accessible. Thus, by employing convenient sampling technique, data have gathered from 120 workers at leather manufacturing company located in Vaniyambadi District.

6.2 Framework of Analysis

The collected have been analyzed by employing simple percentage and weighted average.

7 Significance of the study

The result of the study can provide valuable insights and assistance to various stakeholders, including governments, employers, and workers. The health issues faced by workers in the leather manufacturing industry is crucial for ensuring their safety, well-being, and quality of life. By identifying specific health risks and implementing appropriate interventions, the industry can work towards providing a safer and healthier work environment for its employees. The leather manufacturing industry can contribute to the broader field of occupational health. The findings can help identify common health problems, occupational hazards, and potential preventive measures applicable not only to the specific company but also to the industry as a whole. This research can aid in developing evidence-based guidelines and best practices for protecting worker health in similar settings. The research can inform the development and implementation of regulatory frameworks and policies. The findings can help identify gaps in existing regulations, facilitate compliance, and support the creation of effective guidelines aimed at improving workplace safety and health standards. Workers' health issues can have economic consequences for both individuals and the company. By understanding the impact of health problems on productivity, absenteeism, and healthcare costs, interventions can be developed to mitigate these effects. Creating a healthier work environment can lead to increased productivity, reduced medical expenses, and improved overall economic outcomes. Prioritizing the health and well-being of workers aligns with the goals of sustainable development. Ensuring a safe and healthy workplace contributes to social responsibility, ethical business practices, and sustainable industrial growth. Research in this area can promote sustainable development practices in the leather manufacturing industry, fostering a balance between economic, environmental, and social aspects. Investigating health issues among workers can foster collaboration and engagement among various stakeholders, including workers, management, industry associations, governmental

organizations, and researchers. By involving all relevant parties, research can lead to collective efforts in improving worker health, strengthening relationships, and promoting responsible practices within the industry. The advancement of knowledge in the field it adds to the existing body of research on occupational health and provides specific insights into the unique challenges and risks faced by workers in this industry. The findings can help researchers build upon the knowledge base, develop innovative solutions, and inspire further studies in related areas.

8 Limitation of study

While conducting research on health issues among workers of a leather manufacturing company in the Vaniyambadi district, several limitations should be acknowledged:

The sample size of participants from a single leather manufacturing company in Vaniyambadi district. The results may not be representative of the broader leather manufacturing industry or applicable to other regions. Caution should be exercised when generalizing the findings beyond the study population.

The data collected through surveys and interviews heavily rely on self-reporting by the workers. The possibility of response bias, where participants may provide inaccurate or incomplete information due to recall bias or social desirability bias. The accuracy and reliability of the data are subject to the participants' honesty and ability to recall and report their health issues accurately.

The study might employ a cross-sectional design, capturing a snapshot of the health issues and work conditions at a particular point in time. This design limits the ability to establish causal relationships between work-related factors and health outcomes. Longitudinal studies with follow-up assessments would provide more robust evidence of the temporal relationships between exposure to occupational hazards and health effects.

Without a control group, it can be challenging to determine the specific contribution of work-related factors to the observed health issues. The absence of a comparison group of workers not exposed to the same hazards may limit the ability to attribute the identified health issues solely to occupational factors.

The health issues among workers may be influenced by factors beyond the workplace environment, such as individual lifestyles, pre-existing medical conditions, and socioeconomic factors. Controlling for these external variables can be complex and may introduce confounding factors that limit the ability to isolate the impact of work-related factors on health outcomes.

The study's focus may be limited to specific health issues prevalent among the workers, potentially overlooking other health concerns that may exist in the leather manufacturing industry. Additionally, the study may not cover all possible occupational hazards or environmental factors that contribute to the identified health issues.

Practical limitations, such as time constraints, budgetary limitations, and access to specific equipment or expertise, may influence the study's design, data collection methods, and sample size. These resource constraints may limit the comprehensiveness and depth of the research.

Awareness of these limitations is crucial in interpreting the results and understanding the scope and generalizability of the findings. Future studies should aim to address these limitations to strengthen the evidence base and provide a more comprehensive understanding of the health issues among workers in the leather manufacturing industry.

8.1 FINDINGS

The following table narrates about socio-economic profile of the study.

Table 1

Socio-Economic Profile

Particulars	Numbers (n=120)	Percentage
Age		
20 – 30	11	9.2
31 - 50	91	75.8
Above 50	18	15.0
Gender		

Particulars	Numbers (n=120)	Percentage
Male	77	64.2
Female	43	35.8
Educational Qualification		
Uneducated	44	36.7
SSLC	72	60.0
H.SC	4	3.3
No of elder members		
0	27	22.5
1	20	16.7
2	48	40.0
3	17	14.2
4	6	5.0
5	2	1.7
Status in Family		
Head	76	63.3
Member	44	36.7
Monthly Income		
8000 - 14000	24	20.0
14001 - 20000	82	68.3
Above 20000	14	11.7
Family expenditure		
7000-15000	22	18.3
15001-25000	82	68.3
Above 25000	16	13.3
Location of company		
Area of residence		
Urban	15	12.5
Semi urban	97	80.8

Particulars	Numbers (n=120)	Percentage
Rural	8	6.7
Nature of work		
Permanent	95	79.2
Temporary	25	20.8
Job Experience (Years)		
1-9	19	15.8
10-15	81	67.5
Above 16	20	16.7
Working Hours		
Up to 8	119	99.2
Above 8	1	0.8
Mode of travel to work		
Through walk	4	3.3
Motorcycle	38	31.7
Bus	67	55.8
Others	11	9.2
Travelling time between work place and home		
5to 10minutes	5	4.2
11 to 20 minutes	81	67.5
21 to 30 mins	30	25.0
Above 30 mins	4	3.3
Distance between work place and home		
500m	27	22.5
501m-1kms	84	70.0
Above 1kms	9	7.5

To perform a simple percentage analysis based on the above table,we can calculate the percentage of workers that fall into each category.

Majority respondents are between 31-50 years, Majority workers are male,Majority of the workers' educational qualification is SSLC, Majority of the elders members in a family are 2, Majority of the workers are head members in the family, Majority workers have a monthly income of Rs. 14,001 to Rs. 20,000, Majority workers have family expenditure between Rs. 15,001 to Rs. 25,000, Majority workers have one earning member in the family, Majority workers have two non-earning members in their family, Majority respondents have two elder members in their family, Majority workers reside in semi-urban areas, Majority workers have work experience of 10 to 15 years, Majority workers are first in the job , Majority workers' location of the company is in urban areas, Majority workers work up to 8 hours in their company, Majority workers use the bus for travel to the company, Majority workers have a distance from the workplace to home of 501 meters to 1 kilometer , Majority workers take 11-20 minutes of travel time from the workplace to home, Majority workers' nature of work is permanent.

8.2 Weighted average rank

Weighted average is improving the data accuracy each data point value is multiplied by the assigned weight, which is then summed and divided by the number of the data point.

Health issues faced at your work place.

S.No	Health Issues	SDA	DA	A	A	SA	Total	Mean	Rank
1	BODY PAIN	12	0	0	31	77	120		
		12	0	0	213	385	610	5.08	1
2	DIARRHEA	120	0	0	0	0	120		
		120	0	0	0	0	120	1	23
3	FEVER	105	0	0	9	6	120		
		105	0	0	36	30	171	1.425	17
4	GIDDINESS	66	0	0	16	38	120		
		66	0	0	64	190	320	2.666	7
5	HEAD ACHE	33	2	0	46	39	1120		
		33	4	0	184	195	416	3.46	3
6	IRRITATION INURINARY TRACT	68	0	0	15	37	120		
		68	0	0	60	195	323	2.69	6
7	IRRITATION IN FEET	63	3	0	5	49	120		
		63	6	0	20	245	334	2.78	5
8	IRRITATION IN CHEST	74	3	0	4	39	120		
		74	6	0	16	195	291	2.42	9
9	IRRITATION IN EYES	72	4	0	2	42	120		
		72	8	0	8	210	298	2.48	8
10	IRRITATION IN STOMACH	84	5	0	1	30	120		

		84	10	0	4	150	248	2.066	10
11	ITCHING IN EYES	78	1	0	3	18	120		
		78	2	0	12	90	182	1.51	15
12	ITACHING IN STOMACH	98	1	0	1	20	120		
		98	2	0	4	100	204	1.7	12
13	JOINT PAIN	34	1	0	12	73	120		
		34	2	0	48	365	449	3.74	2
14	KIDNEY DISTORDERS	119	0	0	1	0	120		
		119	0	0	4	0	123	1.025	22
15	STOMAACH ACHE	94	0	0	5	21	120		
		94	0	0	20	105	219	1.82	11
16	SWELLING IN EYES	104	0	0	5	11	120		
		104	0	0	20	55	179	1.491	16
17	SWELLING IN LEGS	107	0	0	5	8	120		
		107	0	0	20	40	167	1.39	18
18	TB	118	0	0	1	1	120		
		118	0	0	4	5	127	1.058	21
19	TEETH PROBLEM	48	1	1	26	44	120		
		48	2	3	104	220	377	3.141	4
20	THROAT INFECTION	114	1	0	2	3	120		
		114	2	0	8	15	139	1.158	20
21	ULCERS	98	0	0	5	17	120		
		98	0	0	20	85	203	1.691	13
22	VOMITING	114	1	0	1	4	120		
		114	2	0	4	20	140	1.166	19
23	WATERY EYES	100	2	0	1	17	120		
		100	4	0	4	85	193	1.6	14

Based on the weighted average score test, the identified health issues among the respondents in the leather factory are as follows (in descending order of severity): Body ache, Joint pain, Headache, Teeth problems, Irritation in feet, Irritation in the urinary tract, Giddiness, Irritation in the eyes, Irritation in the chest, Irritation in

the stomach, Stomach ache, Itching in the stomach, Ulcers , Watery eyes, Itching in the eyes, Swelling in the eyes, Fever, Swelling in the legs, Vomiting, Throat infection, Tuberculosis (TB), Kidney disorders, diarrhea.

8.3 Suggestions

- Provide comprehensive training programs for all employees to raise awareness about the potential health risks associated with working in the leather manufacturing industry. Educate workers on proper handling of chemicals, machinery, and personal protective equipment (PPE).
- Ensure that all workers are provided with appropriate PPE, including gloves, safety goggles, masks, and protective clothing. Regularly check and maintain the condition of PPE to ensure its effectiveness.
- Improve the ventilation system within the manufacturing facility to minimize exposure to harmful chemicals and airborne particles. Conduct regular air quality assessments and implement necessary measures, such as air filters and exhaust systems, to maintain a safe working environment.
- Implement proper handling, storage, and disposal procedures for chemicals used in the manufacturing process. Provide workers with clear instructions on how to handle chemicals safely, including proper labelling, appropriate use, and potential hazards.
- Offer regular health check-ups for all employees to monitor their well-being and detect any health issues at an early stage. Encourage workers to report any symptoms or concerns promptly.
- Encourage job rotation among workers to minimize prolonged exposure to specific hazards. Implement regular breaks to allow employees to rest, stretch, and recover from physically demanding tasks.
- Promote wellness initiatives, such as exercise programs, stress management workshops, and healthy lifestyle campaigns, to support the overall well-being of workers. Encourage employees to participate in these programs voluntarily.
- Ensure that the company complies with all applicable health and safety regulations and standards. Stay updated with industry best practices and make necessary adjustments to policies and procedures accordingly.

9 Conclusion

Through a comprehensive health assessment and analysis of the collected data, several significant health issues have been identified.

The study revealed that workers in the leather manufacturing company experience a range of health issues, with body ache, joint pain, and headache being the most common problems reported. Other health issues identified include teeth problems, irritation in feet, irritation in the urinary tract, giddiness, irritation in the eyes, irritation in the chest, irritation in the stomach, stomach ache, itching in the stomach, ulcers, watery eyes, itching in the eyes, swelling in the eyes, fever, swelling in the legs, vomiting, throat infection, tuberculosis (TB), kidney disorders, and diarrhea.

Intervention and prevention include implementing ergonomic improvements, providing health and safety training programs, conducting regular health screenings, promoting the use of personal protective equipment, and fostering a culture of health and well-being within the organization. Collaboration with relevant stakeholders, such as workers, occupational health experts, and authorities, is essential in successfully implementing and monitoring these interventions.By implementing these recommendations, the leather manufacturing company can prioritize the health and well-being of its workers, reduce the occurrence of health issues, and create a more productive and sustainable work environment.

Overall, this study serves as a valuable resource for the leather manufacturing company in Vaniyambadi District to address the health issues among its workers. By taking appropriate actions based on the study findings, the company can improve the overall health, well-being, and job satisfaction of its workforce, leading to a healthier and more productive work environment.

10 Scope for further research

Health issues among workers of a leather manufacturing company in the Vaniyambadi district, several avenues for further research can be explored to expand the knowledge base and address the existing gaps. While conducting longitudinal studies that follow workers over an extended period can provide a more robust understanding of the long-term health effects of occupational hazards in the leather manufacturing industry.

Tracking changes in health outcomes, work conditions, and exposure to specific risks over time can help establish causal relationships and identify potential preventive measures. Comparing the health issues and occupational hazards across different leather manufacturing companies in the same or different geographical regions can provide insights into variations and similarities. This comparative approach can shed light on industry-wide patterns, best practices, and potential interventions to improve worker health and safety.

Implementing and evaluating the effectiveness of specific interventions aimed at reducing occupational hazards and improving worker health can be an important area of research. This may include interventions such as implementing engineering controls, providing personal protective equipment, introducing ergonomic improvements, or offering health promotion programs. Assessing the impact of these interventions on health outcomes can contribute to evidence-based practices in the industry. Conducting comprehensive risk assessments to identify and evaluate specific hazards and exposures in the leather manufacturing process can guide targeted interventions. Understanding the risk factors associated with specific health issues and developing risk management strategies tailored to the industry's context can help mitigate the adverse health effects. Incorporating the perspectives and experiences of workers through qualitative research methods, such as interviews or focus groups, can provide valuable insights into their lived experiences, perceptions of health risks, and suggestions for improving workplace conditions. Involving workers in the research process can enhance the relevance and effectiveness of interventions.

Assessing the effectiveness of existing regulations, policies, and guidelines related to occupational health and safety in the leather manufacturing industry can identify gaps and areas for improvement. Evaluating the implementation and enforcement of these measures can inform policy recommendations and industry-wide reforms. Exploring the impact of work-related factors on the mental health and well-being of workers in the leather manufacturing industry is an important area for further research. Examining stress levels, job satisfaction, work-life balance, and the impact of psychosocial factors can provide a comprehensive understanding of the overall well-being of the workforce. Encouraging collaboration between researchers, industry stakeholders, and governmental organizations can lead to more comprehensive studies and facilitate the implementation of findings into practice. Collaborative research efforts can also help in addressing practical challenges, accessing necessary resources, and ensuring the relevance and applicability of research outcomes.

By focusing on these areas for further research, it is possible to build a more comprehensive understanding of the health issues among workers in the leather manufacturing industry and develop effective strategies to improve their occupational health and well-being.

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