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OCCUPATIONAL THREATS FACED BY THE WORKERS OF SELECTED BAKERY UNITS IN CHINNALAPATTI

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Abstract

"Occupational health" is a collective term used to characterize all activities and disciplines devoted to maintaining and promoting the health, safety and the wage earners. Every occupational Environment such as a bakery is associated with various health problems that affect worker's health and well-being. The study was done to identify the occupational threats faced by workers of selected bakery units in Chinnalapatti. The data was collected from the working supervisor, staff, and non-staffing workers which includes information such as job nature, clinical symptoms, general health issues, respiratory health, heat and temperature, Musculoskeletal health, spin, lifestyle parameters and as mental health. The majority of the bakery workers were suffering from physical as well as work-related problems like stress, respiratory disorders, and joint pain/ back pain. Continuous work creates a health risk and tiredness among workers who are working in bakery units.

Index Terms: Occupational health, bakery unit, musculoskeletal, lifestyle parameters, stress, mental health.

I.INTRODUCTION

It has been documented that health is considered a positive confirmation of bodily, perceptual, and societal safety, not only the nonexistence of sickness. Occupational health is described as the long-lasting preservation of the capability of working of the bakery workers, taking into consideration that work-related, environmental, societal, and standard of living factors of well-being[(1)].WHO represented a good bakery is a place bakery in which employees and leaders cooperate to utilize an incessant development practice to guard and stimulate the well-being, welfare, and health of the whole manual workers and the bakery withstand capability [(2)].

Occupational hazard is a threat known in the bakery units and can include many types of threats as physical, chemical, biological, psychological, mechanical, and environmental threats. Physical dangers like temperature, light, cold, sound, ionizing radiation, quivering heat, cold, and stress vibration hazards. The bakery hazards include chronic obstructive pulmonary disease, emphysema, and bronchial asthma. Chemical hazards are caused by exposure to chemicals in the workplace, There are many health issues caused by chemical hazards including breathing grime, vapours, metallic, digestion to poisonous outcomes, and regional effects like inflammation of the skin termed as dermatitis, ulcer formation, and tumor[(3)].

Safety measures could affect workers' insolences in the direction of protection, the method workers do their job, and the technique workers cooperate. All of these issues could have a direct influence on security upshots like accidents, through producing data order, practice, and management, to employees are not bare to hazard' show ever, both the managing and employees are accountable for the protection of the workstation [(4)].

II.METHODOLOGY

This study focused on occupational threats faced by the workers of selected bakery units of Chinnalapatti, Dindigul district in Tamilnadu. The data was collected from the supervisor, technical staff, and kitchen workers which includes information such as job nature, clinical symptoms, general health issues, respiratory health, effect of heat and temperature, musculoskeletal disorders, spinal issues, lifestyle parameters, and mental health. The majority of the bakery workers are suffering from work-related problems like stress, respiratory disorders, and joint pain/ back pain. Continuous work creates health risks and tiredness among workers who are working in bakery units. The data was collected using a structured questionnaire through, an interview schedule, and the data was analyzed using SPSS software. Respondents were selected for the study on 70 samples in 13 bakery units were randomly selected for the subject.

S.NO	Personal details	Gender	Variable	Frequency	Percent
1.	Age	Male	15-30	23	40.6
			30-65	34	59.6
		Female	15-30	1	7.7
			30-65	12	92.3
2.	Marital status	Male	Unmarried	20	35.1
			Married	37	64.9
		Female	Married	13	100.0

III.RESULTS AND DISCUSSION

The survey done on to identify the Occupational Threats faced by the workers of selected bakery units in Chinnalappatti and the results are discussed below:

I. Socio Demographic Profile
II. Clinical Signs and symptoms
III. Physiological Problems
IV. Workplace Safety

I. Socio demographic profile

Table I

3.1.1.Age, gender and marital status of the respondents

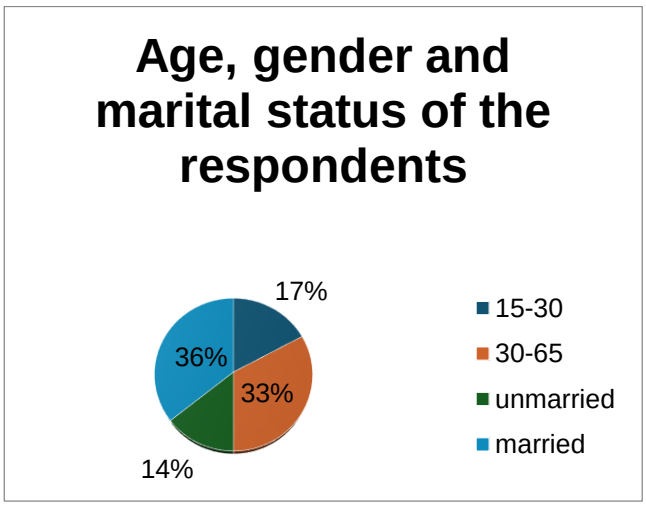


Fig.1

The table provides a detailed breakdown of personal details, specifically focusing on age distribution and marital status across genders. It categorizes individuals based on their age groups (15-30 years and 30-65 years) and marital status (married or unmarried). Among males, 23 individuals belong to the 15-30 age group, representing 40.6%, while 34 males fall within the 30-65 age group, making up 59.6%. For females, only 1 individual is in the 15-30 age group, accounting for 7.7%, whereas 12 females belong to the 30-65 age group, contributing to 92.3%. Regarding marital status, 35.1% of males are unmarried (20 individuals), while 64.9% (37 males) are married. Among females, all 13 individuals recorded in the data are married, constituting 100% of the female group. The information is presented in a structured tabular format, with a visual pie chart below the table for further illustration.

Table.2

3.1.2. Details about the industry

S..NO	Job Nature	Gender	Variable	Frequency	Percent
1.	Industry size	Male	Micro	11	19.3
			Small	16	28.1
			Medium	23	40.4
			Large	7	12.3
		Female	Micro	1	7.7
			Small	7	53.8
			Medium	5	38.5

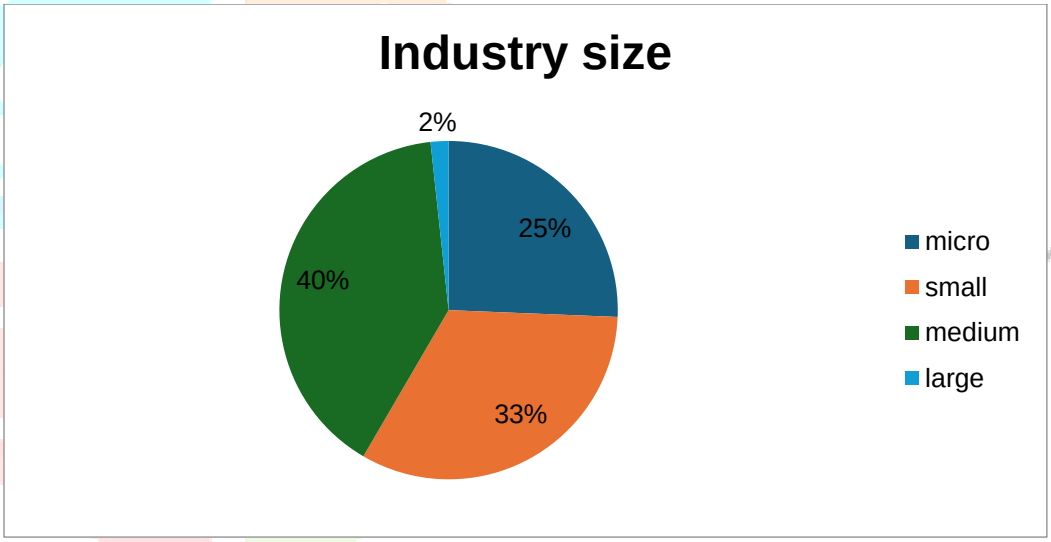


Fig.2

The table presents the distribution of industry size by gender, showing that among males, 40.4% work in medium-sized industries, while among females, 53.8% are employed in small industries.

Table.3

3.1.3 Salary range and work duration

S..NO	Workers	Gender	Variable	Frequency	Percent
1.	Work duration	Male	6-8 hours	9	15.8
			8-10 hours	48	84.2
		Female	6-8 hours	2	15.4
			8-10 hours	11	84.6
2.	Salary range	Male	Less than 15000	34	59.6
			More than 25000	23	40.4
		Female	Less than 15000	11	84.6
			More than 25000	2	15.4

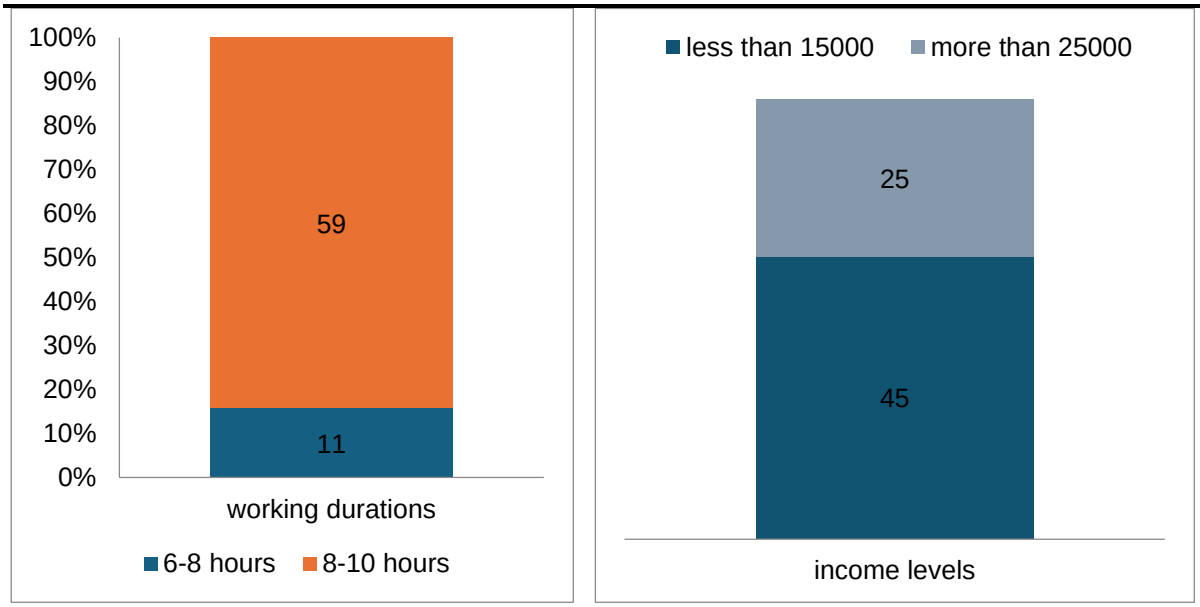


Fig.4

The data table shows that the majority of both male (84.2%) and female (84.6%) workers work for 8-10 hours, while a smaller percentage work for 6-8 hours; additionally, most male workers (59.6%) earn less than 15,000, whereas the majority of female workers (84.6%) fall within the same salary range.

Table.4

3.2 Clinical symptoms

S.NO	Clinical symptoms	Gender	Variable	Frequency	Percent
1.	Blood pressure	Male	Yes	6	10.5
			No	51	89.5
		Female	Yes	5	38.5
			No	8	61.5
2.	Joint pain	Male	Yes	21	36.8
			No	36	63.2
		Female	Yes	8	61.5
			No	5	38.5
3.	Knee pain	Male	Yes	21	36.8
			No	35	61.4
		Female	Yes	7	53.8
			No	6	46.2
4.	Ear pain	Male	Yes	6	10.5
			No	51	89.5
		Female	Yes	1	7.7
			No	12	92.3

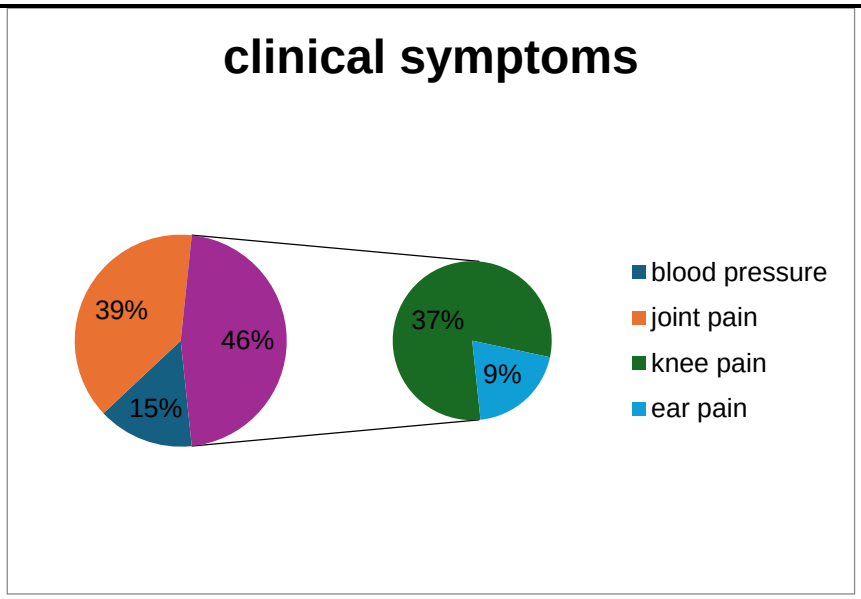


Fig.5

1. Blood Pressure: A higher percentage of males (89.5%) do not experience blood pressure issues, while only 10.5% report having it. Among females, 38.5% have blood pressure issues, and 61.5% do not, indicating a relatively higher occurrence in females compared to males.

2. Joint Pain: Joint pain is more common in females (61.5%) than in males (36.8%), suggesting that females might be more susceptible to joint-related issues.

3. Knee Pain: Similar to joint pain, knee pain affects a greater percentage of females (61.4%) compared to males (36.8%). This may indicate that knee-related issues are more prevalent in females.

4. Ear Pain: Ear pain is reported less frequently compared to the other symptoms. Among males, only 10.5% experience ear pain, while 89.5% do not. Among females, just 7.7% report ear pain, while 92.3% do not, suggesting that ear pain is relatively rare in both genders, due to the constant vibration and the noise of the machinery.

Table.5

3.2.1 Discomfort faced by the workers

S.NO	General discomfort	Gender	Variable	Frequency	Percent
1.	Sleep duration	Male	6 hours	22	38.6
			8 hours	29	50.9
			10 hours	6	10.5
		Female	6 hours	4	30.8
			8 hours	9	69.2

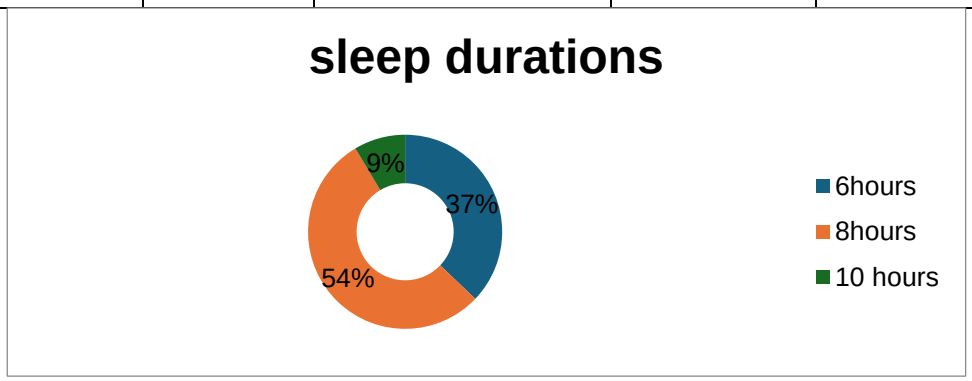
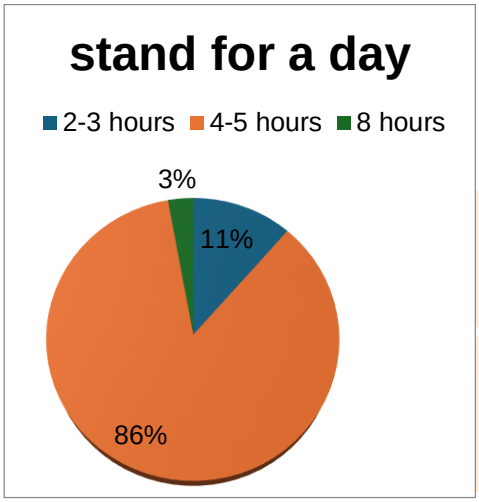


Fig.6

The table presents data on sleep duration in relation to general discomfort, categorized by gender, showing that among males, 50.9% sleep for 8 hours, while among females, 69.2% sleep for 8 hours.

S.NO	workers	Gender	Variable	Frequency	Percent
1.	Hours of Standing	Male	2-3 hours	5	8.8
			4-5 hours	48	84.2
			More than 2-3hours	3	5.3
			8 hours	1	1.8
		Female	2-3 hours	3	23.1
			4-5 hours	8	61.5
			More than 2-3 hours	1	7.7
			8 hours	1	7.7
2.	Short break during work hours	Male	Yes	42	73.7
			No	15	26.3
		Female	Yes	7	53.8
			No	6	46.2



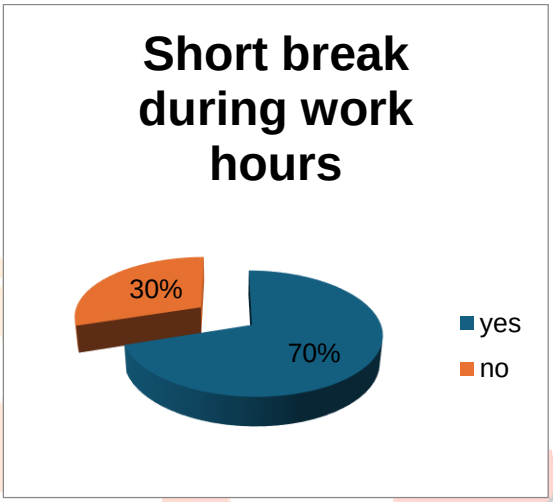


Fig.7

The data suggests that most male workers (84.2%) stand for 4-5 hours a day, while the majority of female workers (61.5%) also stand for the same duration. A small percentage of both genders stand for either shorter (2-3 hours) or longer periods (more than 5 hours).

Regarding short breaks during work hours, 73.7% of male workers take breaks, whereas 26.3% do not. Among female workers, 53.8% take breaks, while 46.2% do not. This indicates that men are more likely to take short breaks than women, which could have implications for workplace policies and worker well-being.

Table.6

3.3 Physiological Problems

S.NO	Respiratory health	Gender	Variable	Frequency	Percent
1.	Respiratory problem	Male	Yes	2	3.5
			No	55	96.5
		Female	Yes	1	7.7
			No	12	92.3

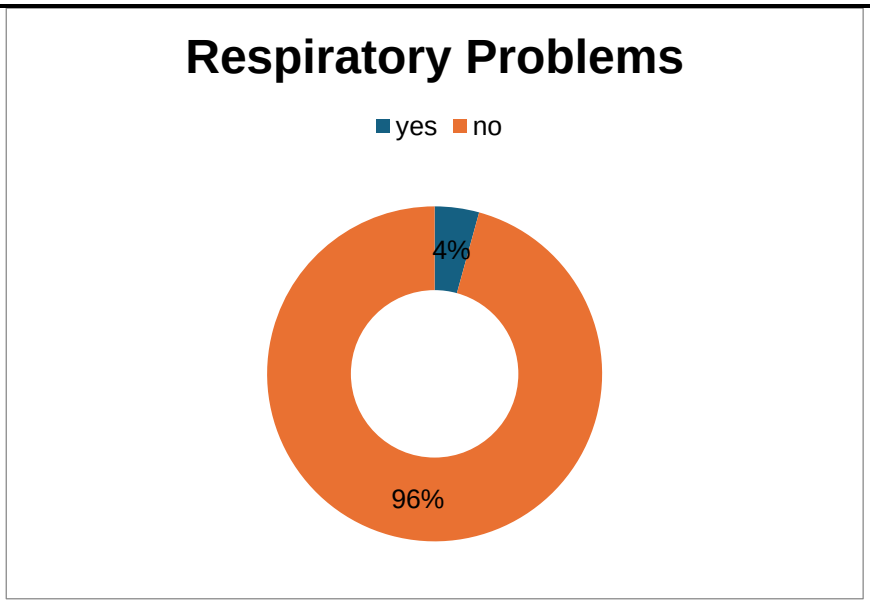


Fig.8

The table presents data on respiratory health, showing that 3.5% of males and 7.7% of females reported having respiratory problems, while 96.5% of males and 92.3% of females did not.

Table.7

3.4.1 Work place Safety

S.NO	Health and temperature	Gender	Variable	Frequency	Percent
1.	Ventilation system	Male	Yes	13	22.8
			No	44	77.2
		Female	no	13	100
2.	Overheat near oven	Male	Yes	18	31.6
			No	39	68.4
		Female	Yes	5	38.5
			No	8	61.5
3.	Proper ventilation or cooling equipment	Male	Yes	22	38.6
			No	35	61.4
		Female	Yes	2	15.4
			No	11	84.6

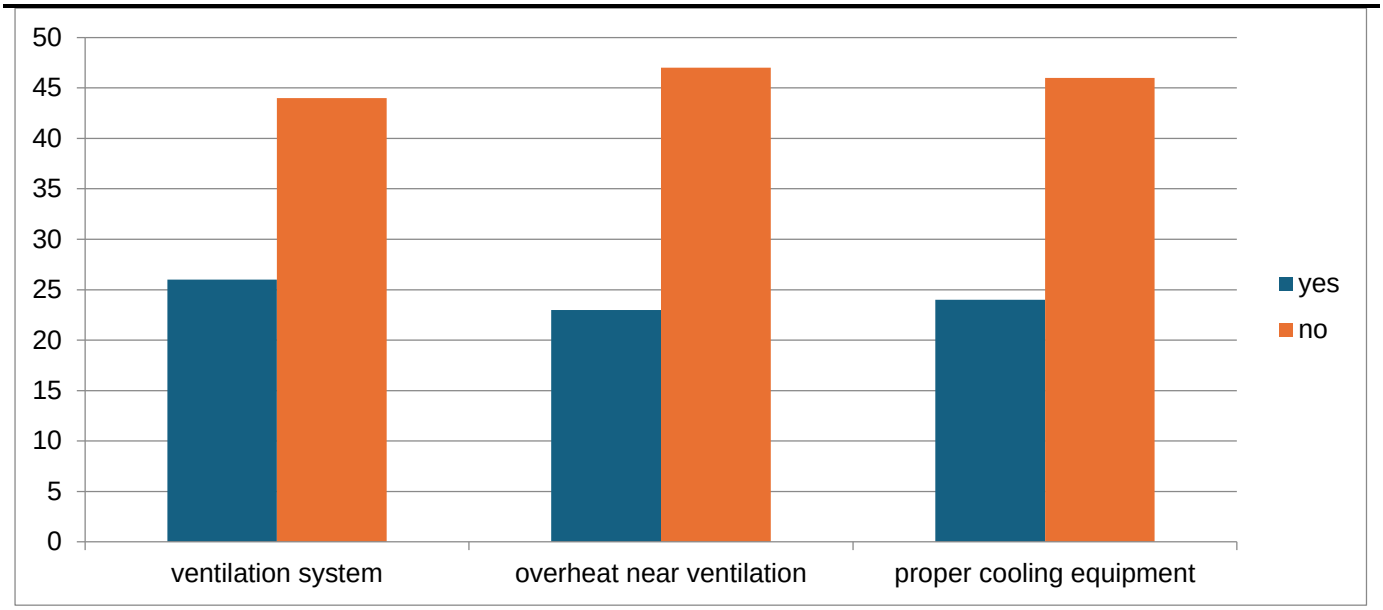


Fig.9

The data in the table highlights gender-based differences in workplace health and temperature-related concerns.

1. Ventilation System:A higher percentage of males (77.2%) report inadequate ventilation compared to females (100%), indicating that both groups experience ventilation issues, but females seem unanimously affected.

2. Overheating Near Ovens:Among males, 68.4% experience overheating, while 31.6% do not.Among females, 61.5% report overheating, while 38.6% do not.This suggests that overheating is a significant issue for both genders, though males report it slightly more frequently.

3. Proper Ventilation:The excess heat produced by the ovens could be controlled by the exhaust fans, that may reduce the heat generated inside the baking area. But in most of the areas, the proper ventilation was not provided. Compared to males, females have significantly less access to proper cooling equipment compared to males.

Table.8

3.4.2 Usage of Protective Gear

S.NO	Skin issue	Gender	Variable	Frequency	Percent
1.	Experience skin issues	Male	Rashes	2	3.5
			Dryness	1	1.8
			No	54	94.7
		Female	Rashes	1	7.7
			Dryness	1	7.7
			No	11	84.6
2.	Any protective gear provided	Male	Yes	9	15.8
			No	48	84.2
		Female	Yes	3	23.1
			No	10	76.9

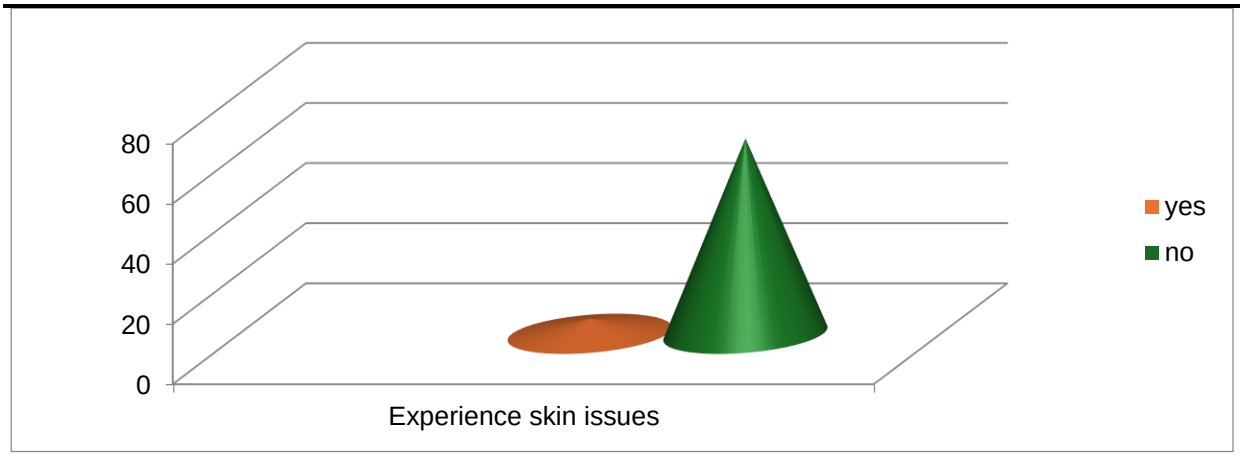


Fig.10

1. Skin Issues

The majority of males (94.7%) and females (84.6%) report any experiencing skin issues. Among those who do, a small percentage of males experience rashes (3.5%) and dryness (1.8%).Similarly, among females, 7.7% report rashes and another 7.7% report dryness. This indicates that while skin issues are not widespread, they still affect a small portion of workers, with females reporting slightly higher occurrences.

2. Availability of Protective Gear

Only 15.8% of males and 23.1% of females report having access to protective gear, while the majority (84.2% of males and 76.9% of females) do not.This suggests a significant lack of protective gear, which could increase the risk of skin issues and other occupational hazards.

IV CONCLUSION

The analysis of occupational threats among bakery workers in Chinnalapatti highlights several key concerns:

1. **Skin Problems:** A minority of workers reported skin issues such as **rashes and dryness**, with females experiencing slightly higher occurrences. However, the majority did not report skin-related concerns.
2. **Lack of Protective Gear:** A **significant number of workers (both male and female) lacked protective equipment**, which could increase their exposure to occupational hazards such as burns, allergies, and respiratory issues.
3. **Gender Disparities:** While more females received protective gear compared to males, the overall distribution was inadequate, putting many workers at risk of workplace-related health problems.
4. **Potential Health Risks:** The bakery environment exposes workers to **heat, flour dust, and other allergens**, which could lead to **respiratory issues, skin irritation, and long-term health concerns**. The absence of protective measures further aggravates these risks.

Recommendations:

- **Ensure the provision of protective gear** (gloves, masks, aprons) for all workers.
- **Regular health check-ups** to monitor and prevent occupational illnesses.
- **Improved workplace safety protocols** to minimize exposure to hazardous materials.
- **Awareness and training programs** on occupational safety and hygiene.

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