

EMPLOYEE RETENTION STRATEGIES OF GARMENTS INDUSTRY IN TIRUPUR CITY

K.JEEVANANDHAM, GB.ARAVINDH RAJA , V.GOKUL RAMAN

Department of Commerce Banking and Insurance, Dr.N.G.P. Arts and Science College, Coimbatore, Tamilnadu-641048, India.

Recognition -----***-----

ABSTRACT

The Face -Based Attendance System is an innovative solution designed to automate and streamline the process of recording attendance in academic institutions and workplaces. Traditional methods, such as manual sign-ins and RFID-based systems, are often time-consuming and susceptible to proxy attendance. This project leverages advanced computer vision and machine learning techniques, particularly using Open CV and the Haar Cascade Classifier, to detect and recognize faces in real time. The system captures live video input through a webcam, processes the facial features, and matches them with stored profiles to mark attendance automatically. This approach not only improves accuracy and efficiency but also enhances security and reduces administrative overhead. The system is implemented using Python and integrates a graphical user interface (GUI) for ease of use. Overall, this project demonstrates the potential of facial recognition technology in creating smart, secure, and contact-less attendance systems.

Keywords: Face recognition, attendance system, computer vision, machine learning, OpenCV, Haar Cascade Classifier, real-time detection, Python, automation, contactless attendance.

Introduction

The garment industry, a labor-intensive sector, faces high employee turnover due to low wages, tough working conditions, and limited career growth. Retaining skilled workers is crucial for productivity, cost reduction, and product quality. Key strategies include offering competitive pay, improving work environments, ensuring job security, and providing development opportunities. Addressing employees' personal needs, such as healthcare and mental wellness, also boosts retention. In a competitive global market, companies that invest in employee well-being and satisfaction benefit from a stable, efficient workforce, enhanced innovation, and long-term success. Effective retention strategies are essential for sustaining growth and reducing operational disruptions.

Objectives of the study

- To analyse the current Employee retention trends in the garments industry in Tirupur.
- To assess the impact of employee Retention on the performance of garments companies in Tirupur.
- To explore the existing retention strategies in the garments industry in Tirupur.
- To identify problem faced by employee during garment industry.

Statement of the problem

The garment industry in Tirupur, a key hub for India's knitwear production, struggles with high employee turnover, impacting productivity, increasing recruitment costs, and lowering work quality. Despite its global significance, many companies face challenges in retaining skilled workers. Contributing factors include low wages, poor working conditions, limited career growth, and minimal employee engagement. The labor-intensive nature of the industry, along with seasonal demand fluctuations, leads to job insecurity. Moreover, intense competition among companies for skilled labor further worsens retention issues. Addressing these challenges is crucial for maintaining workforce stability and ensuring long-term growth in Tirupur's garment sector.

Review of literature

Sharma S (2024)¹ investigates the impact of employee welfare programs on retention in the garment industry in Tirupur, India. Tirupur is one of the largest garment manufacturing hubs in the country, known for its substantial export sector. However, the industry faces significant challenges related to high employee turnover and workforce instability. The paper examines various employee welfare initiatives, such as health benefits, safety measures, housing provisions, transportation services, and social security programs. The authors explore how these welfare programs contribute to

employee satisfaction and, in turn, influence retention rates.

Vijay, R. (2023)³ explores the critical issue of employee retention in the garment industry, specifically focusing on Tirupur, India. Known as one of the largest textile manufacturing hubs, Tirupur has been a key player in the global garment industry, but it struggles with a high rate of employee turnover. The research delves into the factors contributing to this challenge and offers insights into strategies that could improve retention. It identifies several key factors influencing employee retention in the region, including wage structures, working conditions, job security, and career development opportunities. The paper also examines the role of managerial practices, highlighting the importance of leadership in creating a positive work environment and fostering employee loyalty.

Malini TN'(2022)⁵ The study was aimed that identified the various issues and problems faced by these garment women in their personal as well as in professional life. The data has been conducted based on the primary data captured through well-constructed questionnaires. The data collected from 120 respondents were been analyzed using Garrett ranking method. The study concluded that the predominant issues related to job and organization was been identified as rigid human resources policies, compensation for their job work pressure. sanitation. health issues etc. There fore the organization need to work on resolving these issues and problems on the worker for improving organizational productivity.

Kannan, R. (2021)⁶ explores the relationship between work-life balance and employee retention in the garment industry, with a focus on how balancing work demands with personal life influences workers' decisions to stay with their employers. The garment industry, particularly in regions like Tirupur, faces challenges with high turnover rates, and work-life balance is identified as a critical factor in improving retention. The paper discusses how long working hours, intense production deadlines, and low wages in the garment industry contribute to poor work-life balance for employees, leading to burnout and high turnover. Kannan argues that when companies fail to support employees in achieving a healthy balance between work and personal life, it results in dissatisfaction, stress, and ultimately, employees leaving the organization.

Scope of the study

The garment industry in Tirupur, known as the "Knitwear Capital of India," is a major contributor to employment and exports. However, high employee turnover has become a persistent challenge, affecting productivity, business sustainability, and global competitiveness. This study aims to analyze the various

factors influencing employee retention and explore effective strategies to improve workforce stability in the garment industry of Tirupur.

Sample Size: In this research, the sample size is 103.

Sampling Area: The study was conducted in Tirupur City, where a limited population was selected using a convenient random sampling method

Methodology

Both primary and secondary data were used for this study. Primary data was collected from One hundred and three. respondents using a convenient random sampling method. Secondary data was gathered from websites, books, and journals.

Limitations of the study

- Communication problems can be faced because of the multilingual origin of the staff in Tirupur.
- Due to time and resource constraints, the study may not cover all garment factories in Tirupur.
- Data from management interviews may be overly positive, not reflecting actual retention challenges.
- The study may focus on specific retention strategies, excluding others that could play a role.

Analytical Tools

The following analytical tools were used to analyze the collected data:

- Percentage Analysis
- Likerts Scale
- Henry Garret Ranking
- Two Way Table
- Chi-Square Test

Table 1 :Simple Percentage Analysis

Question	Option	No of Repondents	Per
AGE	Below 20 years	54	
	21-40 years	29	
	41-60 years	15	
	Above 60 years	5	
GENDER	Male	67	

	Female	36		BASIS THE SALARY IS AWARDED FOR YOU	Weekly	15
EDUCATION QUALIFICATION	Below High School	28	27.2	PROCESS INVOLVED	Monthly	24
	High School	30	29.1		Stitching	28
	Undergraduate	37	35.9		Checking and packing	38
	Postgraduate	8	7.8		Ironing	22
						Cutting
YEARS OF EXPERIENCE IN THE GARMENTS INDUSTRY	Less Than 5 years	43	41.7	MOTIVATED IN THE WORK ENVIRONMENT	Highly motivated	29
	6-10 years	31	30.1		Fairly motivated	34
	11-15 years	20	19.4		Neither motivated nor demotivated	30
	Above 15 years	9	8.7		Demotivated	10
MARITAL SATATUS	Married	48	46.6	MANAGE STRESS ARISING FROM YOUR WORK	Tour	25
	Unmarried	55	53.4		Entertainment	45
TYPES OF FAMILY	Nuclear	55	53.4	BALANCING YOUR WORK AND FAMILY COMMITMENTS	Music	33
	Joint	48	46.6		Long working hours	24
BASED ON DESIGANATION/ROLE	Production worker	44	42.7	WORKING HOURS	Compulsory overtime	32
	Supervisor	50	48.5		Shift work	26
	Manager	9	8.7		Travelling far away from home	21
TYPE OF JOB IN GARMENTS INDUSTRY	Permanent	57	53.3	HOW MANY WORKING HOURS IN A WEEK	40 Hours	32
	Temporary	46	44.7		48 Hours	25
HOW MANY WORKING HOURS IN A WEEK	40 Hours	32	31.1	Source: Primary Data	50 Hours	26
	48 Hours	25	24.3		60 Hours	20
	50 Hours	26	25.2			
	60 Hours	20	19.4			
WORK FOR LONG HOURS OR OVERTIME AND EVEN OF HOLIDAY	Frequently	26	25.2	Inference: The demographic profile of the respondents reveals that most (52.4%) are below 20 years, indicating a young workforce. A majority are male (65%) and have completed undergraduate studies (35.9%). About 41.7% have less than five years of experience in the garments industry, showing many are new to the field. Slightly more respondents are unmarried (53.4%) and belong to nuclear families (53.4%).		
	Sometimes	38	36.9			
	Occasionally	28	27.3			
	Never	11	10.7			
	Peace rate	25	24.3	In terms of employment, the majority are supervisors (48.5%), and 55.3% hold permanent positions. Most work 40 hours per week (31.1%), with 36.9% reporting		
	Hour rate	38	36.9			

occasional overtime. Salaries are mostly paid on an hourly basis (36.9%).

The most common tasks include checking and packing (36.9%) and stitching. Regarding motivation, 33% are fairly motivated and 28.2% highly motivated, reflecting good morale. Entertainment (43.7%) and music (32%) are popular stress-relief methods. The biggest work-life balance challenge is compulsory overtime (31.1%), impacting personal time.

Figure 1: Chart showing the distribution of respondents based on do you work for long hours or overtime and even of holiday

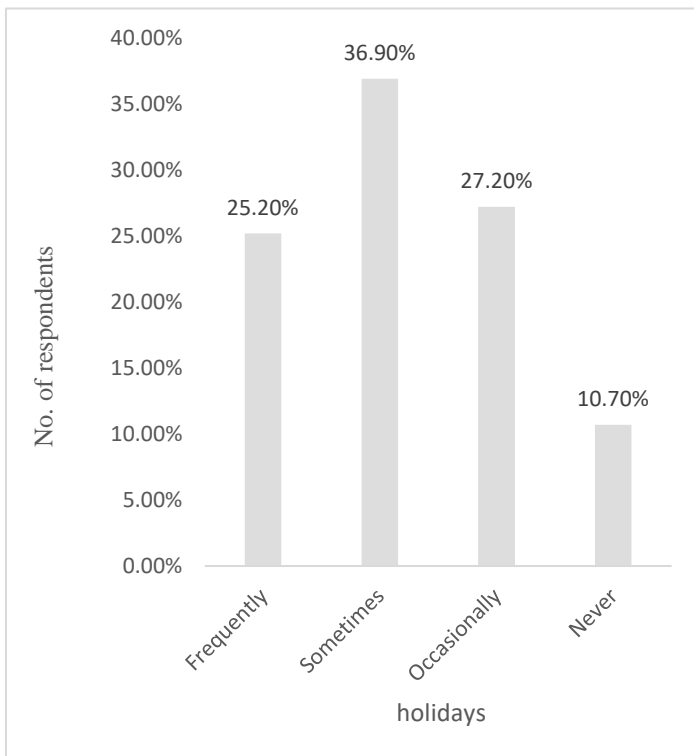


Figure 2: Chart showing the distribution of respondents based on what basis the salary is

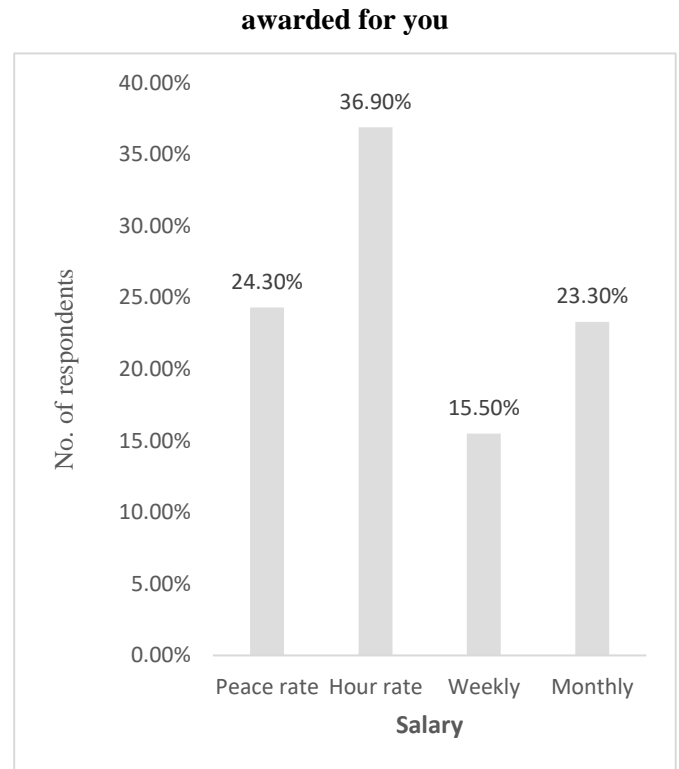


Figure 3: Chart showing the distribution of respondents based on how do you manage stress arising from your work

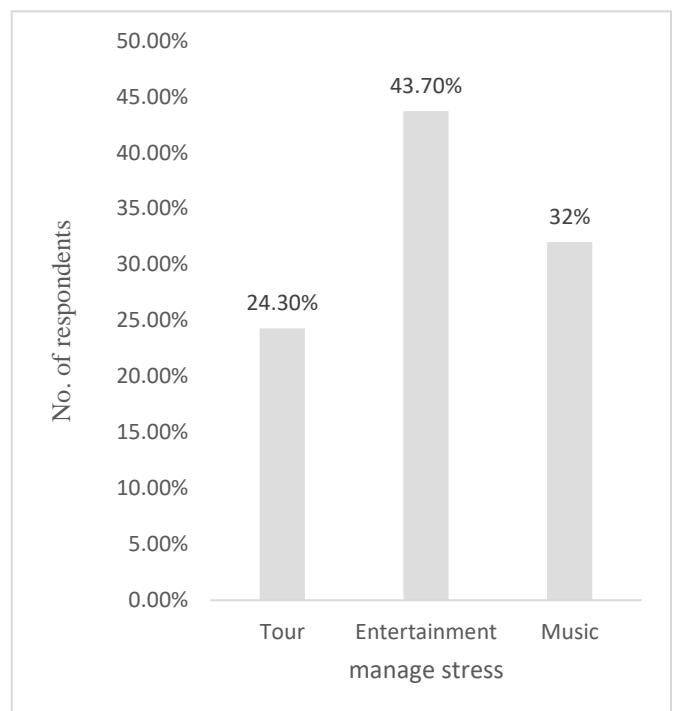


Table 2: Likert scale

Likert scale showing the distribution of respondents based on employee satisfaction

S. No	Factor	Highly Satisfied	Satisfied	Neutral	Dissatisfied	Highly Dissatisfied	Total
1	Work Environment	53 (51.1%)	30 (29.1%)	14 (13.6%)	1 (1.0%)	5 (4.9%)	103
2	Training & Development Programs	34 (33%)	52 (50.5%)	10 (9.7%)	5 (4.9%)	2 (1.9%)	103
3	Effective Communication	44 (42.7%)	32 (31.1%)	22 (21.4%)	3 (2.9%)	2 (1.9%)	103
4	Ability to Succeed in Role	33 (32%)	42 (40.8%)	19 (18.4%)	5 (4.9%)	4 (3.9%)	103
5	Strategies to Retain Employees & Reduce Turnover	42 (40.8%)	38 (36.9%)	10 (9.7%)	4 (3.9%)	9 (8.7%)	103

Source: Primary Data

Significance at 5% level

Inference: The table illustrates respondents' satisfaction across various workplace factors. A majority (51.1%) are highly satisfied with the work environment, followed by 29.1% satisfied and 13.6% neutral. For training and development programs, 50.5% are satisfied and 33% are highly satisfied, while a small portion (6.8%) are dissatisfied or highly dissatisfied. Regarding effective communication, 42.7% are highly satisfied, 31.1% satisfied, and 21.4% remain neutral. In terms of guidance to succeed in roles, 40.8% are satisfied, 32% highly satisfied, and 18.4% feel neutral, with minimal dissatisfaction. For strategies to retain employees and reduce turnover, 40.8% are highly satisfied and 36.9%

satisfied, while 9.7% are neutral and 12.6% express dissatisfaction. Overall, the data shows that most respondents hold positive perceptions about their workplace, particularly in areas such as work environment, communication, and employee retention strategies, with only a small percentage expressing dissatisfaction in each category.

Table 3 Likert scale

Likert scale showing the distribution of respondents based on problems faced

S. No	FACTORS	Very High	High	Moderate	Low
1	Poor working condition	7 (6.7%)	3 (2.9%)	27 (26.21%)	31 (30.09%)
2	Gender equality	4 (3.88%)	9 (8.7%)	25 (24.27%)	48 (46.6%)
3	Infrastructure facilities	4 (3.88%)	6 (5.82%)	38 (36.89%)	31 (30.09%)
4	Health and safety risk	5 (4.85%)	15 (14.56%)	25 (24.27%)	41 (39.8%)
5	Lack of job securities	13 (12.62%)	4 (3.88%)	34 (33%)	31 (30.09%)

Source: Primary Data

Significance at 5% level

Inference : The table presents respondents' perceptions of various workplace concerns. A significant portion (33.9%) rated poor working conditions as very low, with 30.09% rating them low, indicating dissatisfaction. Regarding gender equality, 46.6% rated it low, and 16.5% very low, suggesting room for improvement. For infrastructure facilities, 36.89% of respondents gave a moderate rating, while 30.09% and 23.3% rated it low and very low respectively. Health and safety risks were rated low by 39.8% of respondents, followed by 24.27% moderate and 16.5% very low, highlighting concerns in this area. In terms of job security, 33% rated it as moderate, 30.09% low, and 20.38% very low, showing

that many respondents feel insecure in their roles. Overall, the data indicates that respondents are largely dissatisfied with factors like working conditions, gender equality, infrastructure, health and safety, and job security, with most responses falling into the low to moderate satisfaction range.

Table 4 : Henry garret ranking

Garret ranking table showing the distribution of respondents based on employee retention of motivation

FACTORS	1	2	3	4	5	Total	Rank
Working condition	43 50	75 0	16 50	45 0	52 5	772 5	1
Recognition for your contribution	20 40	24 60	90 0	54 0	24 0	618 0	2
Colleagues and team mates collaboration	16 17	13 74	12 74	49 0	29 4	504 9	3
Leadership in addressing employee concerns	12 54	12 54	12 54	12 54	12 54	391 4	4
Strategies to retain garment workers	92 4	92 4	92 4	92 4	92 4	924	5

Source: Primary data

Significance at 5% level

Inference: The above table shows that Garret table score value ranking. Firstly, the Garret rank is calculated by using appropriate Garret ranking formula. Then based on the Garret ranks the Garret table value is ascertained. The

Garret value given in which are multiplied to record Garret score in table

Finally, by adding each row the total garret score is obtained. Then the garret scored are according to their values

- The first rank is given to “Working condition”
- The second rank is given to “Recognition for your contribution”
- The third rank is given to “Colleagues and team mates collaboration”
- The fourth rank is given to “Leadership in addressing employee concerns”
- The fifth rank is given to “Strategies to retain garment workers”

Table 5 : Henry garret ranking

Percentile position and garrett value

S.no	$100(R_{ij}-0.5)/N_j$	Calculated value	Garrett value
1	$100(1-0.5)/5$	10.3	75
2	$100(2-0.5)/5$	30.9	60
3	$100(3-0.5)/5$	51.5	49
4	$100(4-0.5)/5$	72.1	38
5	$100(5-0.5)/5$	92.7	22

Source: Primary data

Significance at 5% level

Table 6 : Two way table

Two way table shows the relationship between educational qualification and the process involved in work

S.no	Process involved in work
------	--------------------------

	Educational qualification	Checking and packing	Cutting	Ironing	Stitching	Designation	40 hours	48 hours	50 hours	60 hours	Total
1	Below high school	9 23.70%	1 6.70%	7 31.80%	11 39.30%	28					
2	High school	7 18.40%	8 53.30%	3 13.60%	12 42.80%	Manager	5 15.6%	0	2 7.6%	2 10%	9
3	Undergraduate	5 13.20%	1 6.70%	2 9.10%	0	8					
4	Postgraduate	17 44.70%	5 33.30%	10 45.50%	5 17.90%	Production worker	18 56.3%	6 24%	12 46.2%	8 40%	44
Total		38 100%	15 100%	22 100%	28 100%	103					

Source: Primary data

Significance at 5% level

Inference: From the derived data we inferred that 44.70% of Postgraduate faces challenges in Checking and packing, followed by 23.70% of Below high school face challenges in Checking and packing, 18.40% High school of face challenges in Checking and packing and 13.20% of Undergraduate face challenges in Checking and packing. The above table shows that 53.30% of High school facing Cutting, followed by 33.30% of Postgraduate face Cutting, 6.70% of Below high school face Cutting and 6.70% of Undergraduate face Cutting. The above table shows that 45.50% of Postgraduate face Ironing followed by 31.80% of Below high school face Ironing, 13.60% of High school face Ironing and 9.10% of Undergraduate face Ironing. The above table shows that majority (42.80%) of other High school face Stitching, followed by 39.30% of Below high school challenges in Stitching, 17.90% of Postgraduate face challenges in Stitch

Table 7: Two way table

Two way table shows the relationship between designation and the process involved in work

S.no	working hours in a week
------	-------------------------

3	supervisor	9 28.1%	19 76%	12 46.2%	10 50%	50
Total		32 100%	25 100%	26 100%	20 100%	103

Source: Primary data

Significance at 5% level

Inference: The above table shows that majority 56.3% of the respondents are Production worker and they 40 Hours in week, followed by 28.1% of the respondents having supervisor and they 40 Hours in week and 15.6% of the respondents have Manager and they 40 hours in week. The above table shows majority 76% of the respondents' supervisor and they 48 hours in week, followed by 24% of the respondents having Production worker and they 48 Hours in week. The above table shows that majority 46.2% of the respondents Production worker and supervisor and they 50 hours in week, followed by 7.6% of the respondents have Manager and they 50 Hours in week. The above table shows that 50% of the respondents have supervisor and they 60 hours in week, followed by 40% of the respondents with Production worker and they 60 Hours in week, 10% of the respondents have Manager and they 60 Hours in week.

Table 8: Chi-square

Chi – square table showing the relationship between the respondents based on educational qualification and the process involved in work

OBSERVED VALUE	EXPEXCTED VALUE	O-E	(O-E) ²	(O-E) ² /E
9	10.3	-1.3	1.69	0.16
1	4.1	-3.1	9.61	2.34
7	6.0	1	1	0.16
11	7.6	3.4	11.56	1.52
7	11.1	-4.1	16.81	1.51
8	4.4	3.6	12.96	2.94
3	6.4	-3.4	11.56	1.80
12	8.2	3.8	14.44	1.76
5	3.0	2	4	1.33
1	1.2	-0.2	0.04	0.03
2	1.7	0.3	0.09	0.05
0	2.2	-2.2	4.84	2.2
17	13.7	3.3	10.89	0.79
5	5.4	-0.4	0.16	0.02
10	7.9	2.1	4.41	0.55

Source: Primary data

Significance at 5% level

Inference :

Degree of freedom:

$$\begin{aligned}
 V &= (r - 1) * (c - 1) \\
 &= (-1) * (4 - 1) \\
 &= 3 * 3 \\
 &= 9
 \end{aligned}$$

Tabulated chi - square at 5% for 9df = 16.919

Since, the calculated value of chi - square (19.800) is smaller than the tabulated value of chi - square at 5% level of significance and null hypothesis is accepted. Hence the study calculated that the educational qualification of the respondents have no significant effect on and the process involved in work

Table 9: Chi-square

Chi – square table showing the relationship between the respondents based on designation and the process involved in work

OBSERVED VALUE	EXPEXCTED VALUE	O-E	(O-E) ²	(O-E) ² /E
5	2.8	2.2	4.84	1.72
0	2.2	-2.2	4.84	2.2
2	2.3	-0.3	0.09	0.03
2	1.7	0.3	0.09	0.05
18	13.7	4.3	18.49	1.34
6	10.7	-4.7	22.09	2.06
12	11.1	0.9	0.81	0.07
8	8.5	-0.5	0.25	0.02
9	15.5	-6.5	42.25	2.72
19	12.1	6.9	47.61	3.93
12	12.6	-0.6	0.36	0.02
10	9.7	0.3	0.09	0.009
TOTAL				14.169

Source: Primary data

Significance at 5% level

Inference :

Degree of freedom:

$$\begin{aligned}
 V &= (r - 1) * (c - 1) \\
 &= (3 - 1) * (4 - 1) \\
 &= 2 * 3 \\
 &= 6
 \end{aligned}$$

Tabulated chi - square at 5% for 6df = 12.592

Since, the calculated value of chi - square (14.169) is smaller than the tabulated value of chi - square at 5% level of significance and null hypothesis is accepted. Hence the study calculated that designation of the respondents have no significant effect on working hours.

FINDINGS

Simple Percentage Analysis:

The analysis shows that the majority (52.4%) of respondents are below 20 years old, and 65% are male. Most respondents (35.9%) are undergraduates, with 41.7% having less than five years of experience. A majority (53.3%) are unmarried and 53.4% belong to nuclear families. Nearly half (48.5%) work under supervisors, and 55.3% hold permanent positions. Regarding work hours, 31.7% work 40 hours per week. About 36.9% report working overtime sometimes, receive hourly wages, and are engaged in checking and packing tasks. Additionally, 33% feel fairly motivated, and 43.7% prefer entertainment as a means of relaxation. Around 31.1% are subject to compulsory overtime.

Likert Scale Analysis:

According to the Likert scale, 51.1% of respondents are highly satisfied with their work.

Henry Garrett Ranking:

The Henry Garrett ranking method places "Working condition" as the top-ranked factor, while "Strategies to retain garment workers" is ranked fifth.

Two-Way Table Analysis:

The two-way table reveals that 44.7% of postgraduates face challenges in checking and packing, and a majority (76%) of supervisors report working 48 hours per week.

Chi-Square Test Analysis:

The Chi-square test results indicate no significant relationship between educational qualification and the type of work process involved. Similarly, there is no significant association between the designation of respondents and their working hours.

Suggestions

Workers in the garment industry, particularly in Tirupur, often face challenges such as low wages. Improving salary structures and providing attractive benefits like health insurance, performance bonuses, and retirement plans can significantly help in retaining skilled workers. Additionally, introducing structured career development programs, including skill-building workshops and leadership training, can make employees feel more valued. Clear career progression opportunities, such as internal promotions, also enhance employee loyalty and retention. Welfare initiatives such as transportation services, subsidized meals, regular health check-ups, and housing assistance can greatly reduce personal and financial stress, making employees feel supported and appreciated. Moreover, fostering constant communication between management and employees helps create an open work environment where concerns and complaints are addressed promptly. Regular

meetings, feedback sessions, and open forums encourage transparency and employee engagement, ultimately contributing to higher job satisfaction and lower turnover rates.

Conclusion

Employee retention is a critical challenge in the garment industry in Tirupur City, where high turnover rates can lead to decreased productivity, increased recruitment costs, and a decline in overall business performance. However, through the implementation of effective retention strategies, garment factories can significantly improve their workforce stability and create a more loyal and motivated employee base.

The most important strategies that can lead to improved employee retention in Tirupur garment sector are providing competitive remuneration packages, opportunities for career development, and a work-life balance further appreciation of employees' efforts through reward schemes, enhancement of workplace facilities, and proper health and safety measures are required to create job satisfaction and loyalty.

Employee welfare initiatives, such as transportation assistance, healthcare, and other support programs, play a significant role in reducing turnover. A transparent and engaging communication system between management and workers can further enhance trust and foster a positive work environment, which is key to retaining employees

References

1. **Sharma, S (2024).** Employee Welfare Programs and Retention in the Garment Industry: A Case Study of Tirupur. *Journal of Labor Economics*, 26(3), 35-49.
2. **Vijay, R. (2023).** Employee Retention in the Garment Industry: A Case Study from Tirupur. *International Journal of Human Resource Management*, 12(3), 89-104.
3. **Malini TN (2022),** "Women Garment Employees: Issue and Problems", *Neuro Quantology*, Volume 20. Issue 9, ISSN no- 1303-5150, p.p no.422-429.
4. **Kannan, R. (2021).** Work-Life Balance and Its Effect on Employee Retention in the Garment Industry. *Human Resource Development International*, 19(1), 75-89.