



## **Analysis of Effect of Training and Development Determinants on the Job Satisfaction of Employees in Manufacturing Sector**

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### **ABSTRACT**

Employee performance can be improved by training, which connects job needs to the present job description of the personnel. Aside from that, training is a significant financial and time commitment. The time has come for organizations to examine training programs to see how they affect trainees' performance and behaviour. When it comes to managing their employees, job satisfaction is one of the most difficult areas to address. Every company's most valuable resource is its workforce. A company's success depends on the ability of its employees to perform their jobs effectively and efficiently. Organizations' on-going efforts contribute to the development of employees' abilities and capacities. Employees will feel more invested in their jobs when they see evidence that the training program is improving their skills and knowledge. Managers should devise plans to implement or lead training programs that effectively improve workers' abilities at all levels of the organization. Managers must therefore determine what constitutes a good, attractive, and well-managed training infrastructure.

This Paper will focus on studying various determinants of Training and their impact on overall employee satisfaction. Data thus collected has been analysed by using SPSS and AMOS version 26

**Keywords: Training, Employees, Job performance,**

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### **Introduction**

The achievement of a company's aims and objectives is impossible without adequate training of its employees. As a way to keep the business moving, training is a crucial component of employee competency and productivity. The primary goal is to help individuals acquire the knowledge and skills they need to succeed in their jobs and eradicate any issues that may be affecting their performance (Surbhi, 2015). After the training is completed, employees will be able to fully comprehend their new employer's employment needs.

After being hired, new employees are often required to participate in training programs in order to learn the rules, policies, and procedures of their new employer's workplace. To improve the conduct of employees toward their superior, subordinates,

and colleagues, these training programs are designed. Competent employees can therefore assist the firm in achieving industry dominance. In order to stay up with the demands of the job, it may be necessary to undergo training. Showing employees, the company's dedication to their well-being through education and development is a win-win situation for everyone involved. Increasing efficiency and profitability by requiring employees to attend required training is only right. An enhancement in the competitiveness of employees will result from these training initiatives. However, when conducting training programs, it is also important to ensure that the activities are tailored to the needs of teams and individuals. Practical benefits may also be seen following training, such as learners being able to impart their new knowledge and abilities onto other staff members.

Positive employee performance is a key factor in the success of any business, while negative performance can spell doom. It is often believed that workers who are content with their jobs and environments are more productive than those who are dissatisfied. Productivity, absenteeism, and worker happiness are just a few indicators of employee performance (Osunde, 2015). Similarly, to other industries and businesses, the manufacturing industry places a premium on the work of its employees. The efficiency of the workforce is also crucial. Despite certain conceptual distinctions between employee development and training, their connections make more sense in actuality. The general consensus is that employee job performance should improve when training and development (T&D) lead to improvements in pertinent knowledge and the acquisition of pertinent skills, given that the skills obtained in training transfer to the job. Additionally, if the training is applicable, satisfies the needs of the participants and the business, and is skillfully created and presented, it should transmit new information and abilities (Salas, Cannon-Bowers, & Rhodenizer, 1999)

### **Literature Review**

Joseph oumaosewe (2021) The research set out to determine whether or not there is a correlation between a company's investment in staff development and satisfaction with their jobs. This research utilized cross-sectional explanation surveys. The study's sample size was 5,419 members of the court system. Employees were polled through email with a series of closed-ended questions. Two thousand six hundred and eighty-four employees (50% of the total) responded to the surveys. The statistical power was there for us to accept the results as a true representation of the entire population. The huge number of people involved, together with the time and money involved, led to the decision to take this course of action. The results indicated a connection between training and development and contentment in the workplace.

In today's highly competitive business labour market, it is difficult for companies to attract and retain top talent. (T. S. Nanjundeswamy, 2020) The most dangerous enemy of any company is its own disgruntled workers. An engaged worker is a productive worker. essential to the success of the team, the study's goal was to take a snapshot of the state of employee happiness in the workplace. The study's goal is to determine whether or not there are significant differences in job satisfaction, and if so, whether or not there is an effect of different demographic factors on that satisfaction.

Another study done by Aygul Asgarova (2019) focuses on the determining whether or not formal training programs provided by businesses have a positive effect on

employee job satisfaction and sense of accomplishment, and subsequently, organizational productivity. Training has both immediate and long-term effects on workers' drive to succeed and their level of contentment in their jobs. What makes training unique is how it contrasts with employee curiosity, organizational backing, and job satisfaction. (Hassan & Baker, 2018) states that providing employees with the skills they need to boost their company's overall performance is a primary motivation for employers to provide on-the-job training. Workers that are well-trained can help speed up the process of getting good results and assistance. It's worth noting, too, that a well-trained staff may provide a positive customer service experience and bring in new consumers over time.

An organization's employee happiness and turnover go up when it provides training and development opportunities, according to (Chaudhary & Bhaskar, 2016). Plans for employee growth and development have a significant positive impact on employees. Training is highly valued by most employees, and as a result, they seek higher wages. Businesses can get ahead of the competition and produce the best results by providing their employees with the training and development programmes they need to keep their skills up-to-date and improve their performance, motivation, and job satisfaction Narendra singhchaudhary (2016)

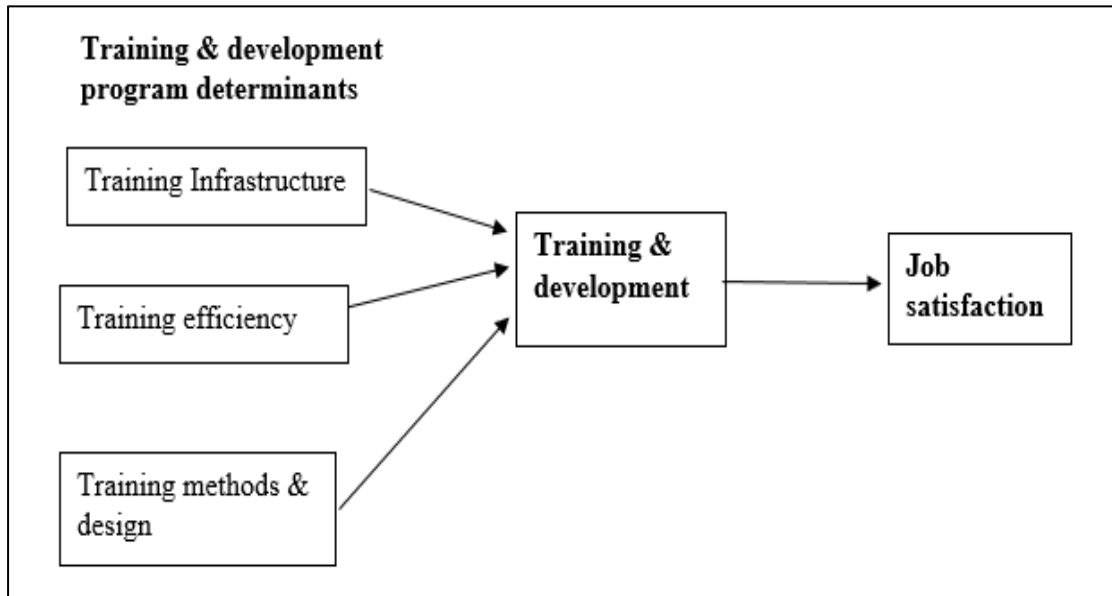
T&D, according to Pearson and Brew (2002), is a learning process that helps boost worker satisfaction and productivity by catering to people's unique sets of interests, abilities, knowledge, personalities, skills, and aptitudes. Employees' knowledge and skill levels can be honed for better performance on the job through education and training (Fletcher, Alfes, & Robinson, 2018). Training and development (T&D) in an organization refer to the formalized process and procedure by which workers are exposed to new information and taught how to use it effectively in their jobs. Employees' ability to meet goals will be directly correlated to the quality of the training and development they receive (Hammond & Churchill, 2018). The company's learning and development program was designed to boost workers' output and output quality. An employee's performance on the job can be enhanced through proper training (Sugahara, 2018).

Numerous studies have shown training to have beneficial results. Businesses that provide their employees with training see improvements in employee competence, morale, output, and the dissemination of information .

**Research objectives:**

- To identify determinates of training and development program.
- To explore relationship of determinates with training and development.
- To study influence of training and development on job satisfaction.

**Figure 1**



*Conceptual framework of the current study*

Based on the conceptual framework laid down following hypothesis have been laid down:

**HYPOTHESES:**

*H1: Training infrastructure significantly influence training and development.*

*H2: Efficiencies of training significantly influence training and development.*

*H3: Training design & methods significantly influence training and development.*

*H4: Training & development has significant and positive impact on job satisfaction.*

**3. RESEARCH METHODOLOGY**

***Sample size***

For the purpose of this study questionnaire was developed and distributed to 300 employees working in various manufacturing plants , but only 260 participants responded back working in the manufacturing sector in the Delhi-National Capital Region which finally served as the study's population. With 225 returned questionnaires ,the response rate was 86.53 percent. All variables were measured on a five-point Likert scale, with "strongly agree" given a score of five and "strongly disagree" receiving a score of one, with the exception of demographic questions.

**3.1 Instruments Used**

The measures for independent and dependent variables were selected based on previous literature. The items for training and development and its determinants were adapted from the study of Kamal et al., (2016). The items measuring training and development derived from the study of Anwar &Shukur (2015). The job satisfaction was measured using three items adapted from the study of Tabassum et al., (2021).

**3.3 Technique of Data Analysis**

In order to accomplish the goals of this study, descriptive and inferential statistics were employed. Statistics like mean, standard deviation, percentage, and frequency were used to compile the descriptive.Both SPSS and AMOS version 26 were used extensively throughout the research project for their statistical analysis capabilities. To begin, an exploratory factor analysis was conducted to establish the structure of a dataset. After an instrument had been developed, its construct validity waschecked

using EFA. After the study's factors were settled on, a confirmatory factor analysis was performed to ensure that the proposed scale was appropriate for the research. Structural Equation Modeling, a multivariate technique for estimating the relationship between many variables at once, was the last step.

#### 4. Data analysis and Results:

**Table 1: Demographic information (N=225)**

Items	Items	Frequency	Percentage
Gender	Male	122	54.4
	Female	103	45.6
Age	Below 25	52	23
	26-35	135	60
	36-45	38	17
Marital Status	Married	110	48.9
	Unmarried	115	51.1
Years of experience	0-2	34	15.2
	3-5	89	39.6
	4-7	73	32.4
	≥10	29	12.8

#### 4.2 Exploratory Factor Analysis

Exploratory factor analysis was used to extract the various elements that contribute to SMEs becoming global (EFA). Kaiser–Meyer–Olkin (KMO) tests were run to determine sample size before the analysis was performed, and the KMO statistic is 0.832, which is significantly higher than the minimum acceptable value of 0.60. This number proved that the data set was large enough to conduct the factor analysis. The adequacy is further supported by the fact that the Bartlett test of sphericity was statistically significant at the 1% level.

In the present investigation, Principal Component Analysis with Varimax Rotation was used to conduct the EFA. Five components were recovered using the factor selection criteria of Eigen value > 1, which allowed for an adequate explanation of the overall variance of 72.626%.

The results of scree plot also confirmed that factors having Eigen values above 1 are 5 as shown in Table 2.

Cronbach's alpha was utilised to determine the reliability of the proposed scale components with regard to one another. Table 3 displays the values of the variables in the study. From the data in the table, we can conclude that the alpha values are greater than or equal to 0.70, spanning from 0.762 to 0.865. Hair et al. (2010).

**Table 2: KMO and Bartlett's Test**

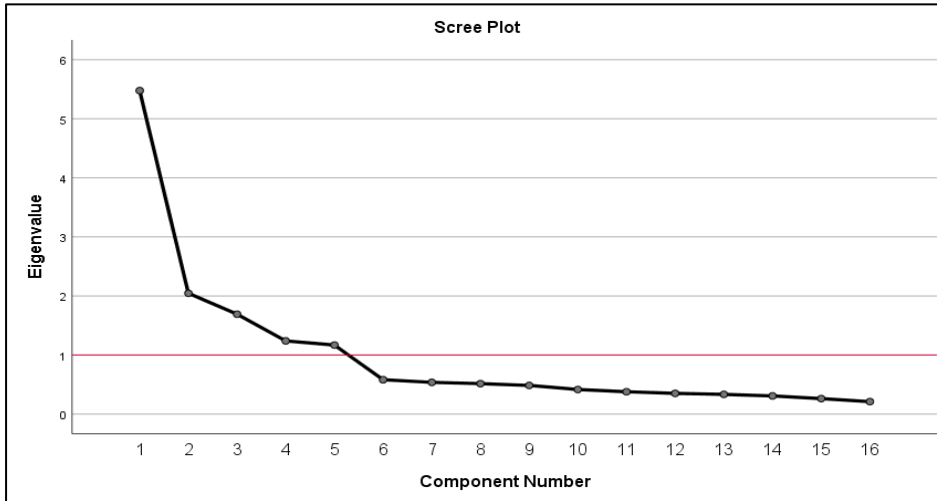
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.832
Bartlett's Test of Sphericity	Approx. Chi-Square	1591.160
	df	120
	Sig.	.000

**Table 3: Descriptive, factor loadings and alpha value of each construct**

		Mean	Standard deviations	Factor loadings	Cronbach's Alpha values
Training infrastructure	q1	3.23	.880	.822	0.822
	q2	3.38	.858	.751	
	q3	3.44	.794	.759	
	q4	3.26	.884	.758	
Training efficiency	q5	3.29	.893	.860	0.845
	q6	3.51	.861	.782	
	q7	3.39	.976	.851	
Training methods & design	q8	3.54	.785	.792	0.762
	q9	3.46	.738	.765	
	q10	3.46	.725	.774	
Training & development	q11	3.54	.881	.842	0.865
	q12	3.59	.892	.794	
	q13	3.52	.941	.813	
Job satisfaction	q14	3.93	.850	.817	0.824
	q15	4.00	.863	.849	
	q16	4.00	.928	.841	

*Source: Primary survey*

**Figure 2: Scree plot**

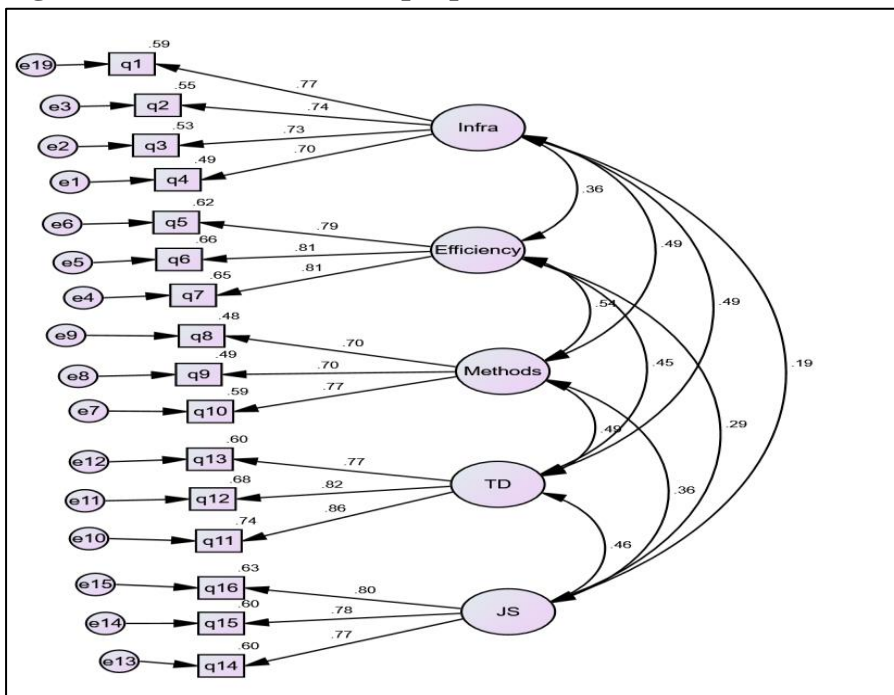


### 4.3 Confirmatory factor analysis

The CFA model was prepared by considering each construct as individual or exogenous variable. The findings of CFA help in testing the reliability and validity of the proposed scale of the study. The internal consistency of the scale was measured using Composite reliability (CR). The study measure convergent validity using the Average Variance Extracted (AVE) and the discriminant validity was tested through, maximum shared variance (MSV). As per Hair et al., (2010), the criteria for achieving reliability and validity of construct is that CR values should be above 0.7, the AVE value above 0.5 and the MSV values < AVE values for given data set.

The findings of table 4, confirmed that the select scale with given data is reliable and valid for further analysis, as  $CR > 0.7$ ,  $AVE > 0.5$  and  $MSV < AVE$ , all fulfilling the threshold criteria. Further, fit indices of CFA model are within the threshold limit, i.e., GFI, CFI values are greater than .90 and RMSEA is lower than .05.

**Figure 3: CFA model for the proposed scale**



Source: Primary Survey. Note: Here: Infra: Training infrastructure, Methods- Training methods & design, TD-Training & development and JS-Job satisfaction.

**Table 4: Composite Reliability, Convergent Validity & Discriminant Validity for Scale Items**

CR	AVE	MSV	Infra	Efficiency	Method	TD	JS	
<b>Infra</b>	0.823	0.539	0.825	<b>0.734</b>				
<b>Efficiency</b>	0.844	0.643	0.844	0.362***	<b>0.802</b>			
<b>Method</b>	0.765	0.520	0.768	0.488***	0.535***	<b>0.721</b>		
<b>TD</b>	0.859	0.670	0.865	0.493***	0.448***	0.487***	<b>0.819</b>	
<b>JS</b>	0.825	0.610	0.825	0.191*	0.286***	0.356***	0.462***	<b>0.781</b>

Note: Significance of correlation (\* p < 0.050, \*\* p < 0.010, \*\*\* p < 0.001)

Source: Gaskin, J. & Lim, J. (2016), "Master Validity Tool", AMOS Plugin.

**Table 5: Goodness of Fit indices in CFA model**

Indices	Abbreviation	Observed values	Recommended criteria	References
Normed chi square	$\chi^2/DF$	1.312	$1 < \chi^2/df < 3$	Hair et al., (2010)
Goodness-of-fit	GFI	0.940	>0.90	
Adjusted GFI	AGFI	0.913	>0.80	
Normed fit	NFI	0.924	>0.90	
Comparative fit	CFI	0.981	>0.95	
Root mean square error of approximation	RMESA	0.037	<0.05 good fit <0.08 acceptable fit	
Tucker-Lewis's index	TLI	0.975	$0 < TLI < 1$	

#### 4.5 Hypotheses testing using SEM model

Maximum likelihood estimation was used in the SEM analysis because it is the most popular and widely accepted estimation strategy for hypothesis testing (Blunch, 2013). Table 6 displays the findings from the path analysis and hypothesis testing performed. The statistical significance of each relationship is indicated by the p-value and the standardized path coefficient for the relationship. Research hypotheses are accepted when the critical ratio (t value) is greater than 1.96 and the p value for that path is less than 0.05. By referring to Table 6 and Figure 4, it is concluded that the standardized path coefficient ( $\beta$ ) of training infrastructure to training & development is positive, strongest and significant having value 0.350, p=0.000. Thus, supporting hypothesis H1. The factor related to training efficiency has significant influence on



overall training & development with  $\beta = 0.196$ ,  $p = 0.006$  ( $p < 0.05$ ), confirming hypothesis H2.

Further, the impact of training methods and design on TD is positive with  $\beta$  value 0.319 and  $p < 0.05$ , thus hypothesis H3 is approved. All these results confirmed that training and development is significantly influenced by all three factors selected in current study.

Finally, the training and development (TD) is significant predictor of job satisfaction as it has positive impact on job satisfaction of the employees, with path coefficient value  $= 0.529$ ,  $p = 0.000$ . Since,  $p$  value below 0.05 and CR value above 1.96, hypothesis H4 was accepted.

The coefficient of determination ( $R^2$ ) for training and development is 0.263, it revealed that 26.3% variation in TD explained by training and development determinants (infrastructure, efficacy & methods)

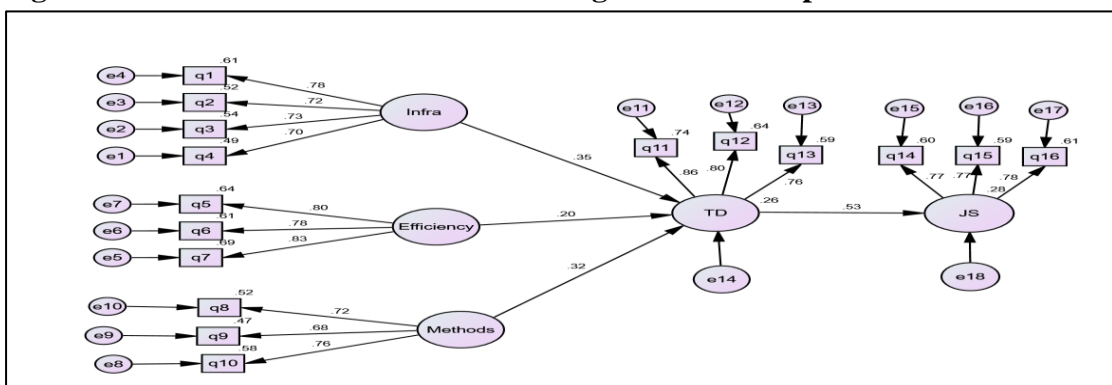
$R^2$  value is 0.279, for job satisfaction inferred 28% of variation in satisfaction explained by training and development.

**Table 6: Path coefficients of the Structural model**

Outcome Variables		Independent Variables	S.E.	C.R.	P	Standardized regression weights	Hypothesis Results
Training & development	<--	Training Infrastructure	.092	4.550	***	0.350	Accepted
Training & development	<--	Training Efficiency	.065	2.737	.006	0.196	Accepted
Training & development	<--	Training Methods & design	.110	4.055	***	0.319	Accepted
Job satisfaction	<--	Training & development	.071	6.576	***	0.529	Accepted

Note: P refers to the differential probability.

**Figure 4: SEM model for factor influencing TD and its impact on JS**



Source: Primary Survey

### **Discussion:**

In the first part of this research, it was investigated that what influences training and development in the workplace. Later, the effect of generalised training and development on contentment in the workplace was investigated. Training infrastructure, program efficiency, method, and design were all found to have a significant impact on the success of the training and development program. The strongest predictor, according to the study, is the positive impact of all these factors on infrastructure. These results are similar to what was found in Maroudas et al. (2018) and EL Hajjar&Alkhanaizi(2013).

Current findings indicate that training and development programs implemented by organisations significantly affect employee happiness on the job. Consistent with the findings of Choo and Bowley (2007). Employees who feel that they are progressing in their training and development are more likely to be happy in their jobs, according to a study, and this is largely due to the impact of the training's welcoming atmosphere, practical layout, and effective methods.

An employee's level of satisfaction and productivity can both benefit greatly from a well-designed training and development program. The results of this research will aid in raising consciousness about the value of the "person fit job perspective," as well as illuminating its pivotal function in guiding businesses as they design employee development programs. Employees will be able to do their jobs better after receiving training. Training and development have a significant bearing on worker contentment and productivity.

This research shows how training and development can increase happiness on the job. Workplace happiness is strongly correlated with opportunities for professional growth and development. It is important for employees to feel that there is upgradation in their knowledge and abilities during the training program and they should feel positive emotions about their work. Organisations should devise plans to implement or lead training programs that effectively improve the competence of workers at all levels.

Supervisors need to understand the importance of creating a pleasant, well-organized, and functional training environment in order to achieve their goals. Learning strategies and curriculum are tailored to each individual worker's needs, increasing the likelihood of training success.

### **Limitations and Future research:**

There are a few caveats to this study as well. The first is to focus only on these three factors as potential predictors of training and development outcomes. The proposed model can be expanded upon in future research to include additional factors. Second, the respondent's own beliefs and tendencies when filling out the questionnaire are the sole basis for estimating study factors. This means there's a chance the data set contains some error and bias. Finally, the small size of the sample is a caveat. Gathering information from a different part of the country is possible.

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