



# Role of Training in Women Empowerment: An Empirical Analysis

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DOI: <https://doi.org/10.30880/jtet.2023.15.01.020>

Received 26 September 2022; Accepted 11 January 2023; Available online 31 March 2023

**Abstract:** India is progressing economically, but it needs to pay more attention to social and human development together with women empowerment. The economic contribution and empowerment of women are pertinent to strengthen female's rights and enable them have control on their lives and influence the society. Sustainable development can be achieved through economic empowerment of women. Empowered women and gender equality lead in multiplying the development efforts. Under the SDG-5, India has stated that it will ensure women and girls contribute as equivalent partners to growth and development of the country by 2030. At the global level too, it has been observed that if women participate equally with men in the economic activity, the world will add \$11 trillion in the annual 2025 GDP. Investing on education and skill enhancement through Vocation education and training, has been a pertinent issue for the Indian government for the last decade. The current paper identifies the constructs of women empowerment and observes the role of formal and informal training in female empowerment. In all 317 women participated in the study through two stage sample design involving area sampling followed by convenience sampling. The study identified five constructs of women empowerment Economic Empowerment, Family Health and Well Being, Civic Empowerment, Social Empowerment, Educational Empowerment through exploratory factor analysis confirmed through confirmatory factor analysis. Further, the mean scores of all the constructs of women empowerment for formally trained respondents were higher than informally trained respondents but no significant difference between women empowerment, constructs of formally and informally trained women observed in the study.

**Keywords:** Women empowerment, family health and well-being, civic empowerment, social empowerment, educational empowerment.

## 1. Introduction

Women empowerment refers to women being authorized to take decisions in matters pertaining to varied aspects of life which enable them to handle /manage risk and improve their well-being and status. An empowered woman can sense her self-worth and can choose and influence societal change of herself and others. Gender equality is a basic right, but women face various challenges due to gender discrimination. There are disparities such as payment of lower wages as compared to male counterparts, unequal education opportunities, domestic work, and marriage at an early age. Empowerment of women is essential for the overall development of any country be it individual health improvement, the progress of families, social development, and community upliftment. When a woman is empowered, she gains the opportunity to understand and speak about her rights and support the community. They are also able to rise in social standing, and they can develop this into future generations.

The development of the country has seen an increase in women's workforce involved in the manufacturing sector with a steady decline in the agricultural sector along with migration from rural to urban areas. These transitions involve

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an increase in education levels, a decline in fertility rates, and gender-based implications in the labour market. It has been observed that a majorly hypothesized relationship between economic development and female labour force participation (FLFP) is U- shaped curve. It says that FLFP is higher in underdeveloped and developed countries while it is least in developing or middle-income countries. FLFP is both driver and an outcome of development. Elsayed & Roushdy, (2017) reflects that labour market participation, economic aspirations and business knowledge of women have improved in rural Egypt where skill development measures were taken. Bayeh, (2016) identifies that the economic, social, political, and environmental development of a country can be achieved by the empowerment of women, only men's participation will not suffice. Verick, (2018) opines on the complex relationship between FLFP and development which reflect in economic growth, social norms, attainment of education, fertility rate etc. The author also emphasized on quality of the job to match with access to secondary and higher education for women. Klasen, (2019) suggests trends in FLFP rates are inconsistent in developing countries despite a decline in fertility, an increase in education, and favourable economic conditions. A strong increase has in FLFP rates been observed in Latin America along with a marginal increase in the Middle East and a slight decrease in South Asia. In addition, these trends are affected by family's economic conditions, suitability of occupations, policies for encouraging women's employment, and breaking of sectoral work-related blockades for females. Oketch, (2007) undertook a comparison of vocation with conventional education in Africa and found that Technical and vocational education and training (TVET) is essential for progress, and it should be structured in such a way that it supplies a better application to the labour market. Bol & Weeden, (2015) observed that vocational credentialing in comparison with tertiary credentialing gives a particularly high payoff in Germany while in the United Kingdom, it is the other way around. Ahmed, (2016) observed a safety net corresponding to vocational education in the Indian context and found that there is an encouraging impact of vocational education and training (VET) on wages and the number of individuals taking part in salaried work. Chinen et al., (2017) show the combination of vocational, business and life skills improve FLFP significantly while individually they have a small impact.

## 2. Women in TVET

Misra (2006) explains Indian female empowerment as a mission directed towards (i) Removing disparity based on gender across various societal levels and (ii) the Engagement of Women in policy formulation and decision-making processes of varied private and public organizations. Studies have shown that productivity and economic growth can be increased by capitalizing on the full economic potential of women. In addition, the economic empowerment of women can be encouraged by reducing gender barriers in the work setting (Chaudhary & Verick, 2014).

Ojobo (2008) in a study based on Nigerian women found education plays the role of a catalyst in female empowerment and increases their participation in educational policy formulation, and extensive enlightenment campaigns, removing the stereotypes in the division between men's and women's job. It was also opined that women should organize to meet the challenge of playing an active and important role in the struggle for liberalization, development, and personal and national progress.

Hilal (2012) observed a positive effect on youth and women's development by increasing VET. This also aided labour force participation rates, employment, and income generation. Ali and Hatta (2012) investigated the success rate of microfinance in empowering women in Bangladesh. Jabbar and Zaza (2016) identified that in a refugee community, patterns are deconstructed, and gender roles altered; this gender equality and women empowerment are prerequisites for sustainable development for attaining the millennium development goal. Cornwall (2016) stated the government should emphasize on "what women can do for development rather than what development can do for women". Empowerment initiatives begin and end with increasing women's access to resources rather than changing how they may have been taught to see themselves as women, a citizen, and human being.

Bayeh, (2016) concludes that the overall development of a country can be attained by empowering women and obtaining gender equality. Sheena & Naresh, (2017) and Cho et al., (2015) explore the role of entrepreneurship and vocational education in skill enhancement and find its effectiveness at different levels of women empowerment. Shioyama, (2020) discusses women's empowerment in relation to Work Experience Education (WEE) at the secondary school level. The result reveals that access to resources, job opportunities, and the acquisition of decision-making skills. WEE has an influencing effect on women empowerment. Chinen et al., (2017) emphasized on the effects of vocational and business training programmes in increasing women's labor force participation, earnings, self-employment, sales, profits, and economic empowerment. Study also found that impact of vocational education can be increased by the addition of life skills training. In addition, gender-based focus by considering gender norms, restricted mobility of women, and conventional gender roles, childcare facilities and allowances for transport can also aid empowerment. Elsayed & Roushdy, (2017) studied women in thirty villages of rural Egypt were given exhaustive training in vocational, business and life skills. Study reflects that while labour market results, economic ambition and business acumen of women improved in comparison to women in villages who were not part of the study, social empowerment measures (e.g., decision-making ability and attitudes to gender equality) were unaffected. Obayelu & Chime, (2020) investigated dimensions and determinants of women's empowerment in rural Nigeria provides the impact of vocational and entrepreneurial training for youngsters of Malawi where formal education admission and employment is very minimal. Result shows that decisions of females are largely influenced by family duties. The training provides skill enhancement, enhanced human capital valuation and improved well-being, showcasing positive effects for men, as compared to women.

Huis et al. (2017) identify a three-dimensional model for women's empowerment. Personal, Relational and Societal empowerment are the three identified dimensions which are influenced by time and culture. Ventura et al. (2021) studied the outcome of a workshop on “Women empowerment and gender equality, responsible research and innovation”—Research Project “SOILDarity” with participants from East Europe and Africa. The author emphasises that women must contribute to social sustainability and be in leadership roles, also it should be acknowledged by all their societal counterparts. ILO's (2020) report gives guidelines to frame instruments, guidance and practices for shaping gender equality commitments and actions in the private sector. It also provided workplace guidance on empowering women. Pal & Gupta (2022) assessed the impact of individual & household attributes, social, and economic attributes and ownership documents on credit, and its impact on social & psychological empowerment and economic empowerment of women leading to sustainable women empowerment. Ambler et al. (2021) identify that economic intervention increases access to resources which leads to proximity to literacy. Behaviour change intervention (BCI) made no such significant impact whereas it increased self-confidence while economic intervention improves decision-making abilities. Chaudhary & Verick, (2014) tries to find a reason for the rate of declining Female Labour Force participation in India. It emphasizes the role of Vocational training and on-the-job training in increasing the likelihood of being self-employed for women, especially in rural areas. Discrimination and susceptibilities that women face at employment can be tracked to their skill development and education. As compared to men, women have less accessibility to TVET programmes. Even if they do, their choice of discipline differs greatly from that of men. These choices depend on social, cultural, and economic factors. Well-defined societal expectations and gender stereotyping of women's roles and occupations result in causing these differences. But only by letting loose such hindrances, can we provide a level playing field to women in the workplace. Females are largely found in unskilled, semi-skilled and low-paying occupations. In South Asia, as per ILO, 84% of women are in vulnerable employment.

The Government of India through the Ministry of Skill Development and Entrepreneurship has emphasized improving female labour force participation. However, it faces major challenges such as gaps in formal education, dropouts, and quality of education. Deloitte (2019) on Labour Force Participation Rate (LFPR) in India has reported that out of 54% of LFPR, only 5% are formally skilled. Female to male LFPR ratio is currently 1:2 with 95% of women (195 million) employed in the informal sector. It has been seen that there is a lack of Indian literature on studies about women's empowerment. This study aims to find the various constructs of women's empowerment.

The relation between FLFP and vocational education has suggested that training placed a significant role in women's career transition hence empowerment. Evidence that VET has a small positive effect on employment, earnings, and women's psychological, economic, social, and political empowerment has been depicted. Hence the focus on vocational education should be enhanced to increase FLFP in the coming years and enhance women's empowerment. The current paper investigates the role of vocational education in women's empowerment.

Therefore, this study aimed to identify the indicators of women's empowerment after pursuing vocational education training programs; and to observe the difference between identified constructs of women empowerment of formally trained / informally trained female workforce. The hypothesis: There is no significant difference between identified constructs of women empowerment of formally trained / informally trained female workforce.

### 3. Research Methodology

The present study was to be based both on primary and secondary data. Primary data was obtained using a structured questionnaire through schedule whereas secondary data was collected from various journals, government and industry reports, newspapers, magazines etc. Comprehensive questionnaire was prepared and a set of 32 items were identified from various national and international publications. After initial screening 04 variables were dropped respectively for respondents. Thus, the resulting questionnaires consisted of 28 study questions which excludes socioeconomic background for the respondents belonging to two categories (formally and informally trained). Study dimensions in questionnaire involves questions w.r.t. economic empowerment such as “I can spend money as per my wish”, related to family welfare decisions such as “I bring up my children without any discrimination of boy or girl”, related to civic equality such as “The decisions regarding children are also discussed with me”, related to social equality such as “People in my community recognize me with my worth.” and related to self-education such as “I have complete freedom in deciding as to what I have to study.” These study items were rated from 1 Strongly disagree to 5 strongly agree.

The populations of the study consist of two categories of respondents: Category 1 (women formally trained in the National Capital Region (NCR)) and Category 2 (women informally trained in the National Capital Region (NCR)). The sampling design comprises probability and non-probability sampling techniques. Initially, the National Capital Region of (NCR) was divided based on a map of Delhi i.e., different districts of Delhi. Further convenience sampling was used to collect data from respondents as due to COVID apprehensions most of the people were scared to respond thus schedule method was used to collect data on a questionnaire consisting of variables corresponding to women empowerment. A sample of 317 employed women respondents was collected from NCR.

#### 4. Pretesting

A pretesting of the questionnaire was done after collecting 98 responses and based on that response the questionnaire was refined for final data collection. These pretesting responses were collected from a different region of the National Capital to test methodology and statistical precisions.

#### 5. Data Analysis and Results

##### 5.1 Data Collection and Cleaning

345 responses were collected from respondents from different districts of Delhi and nearby areas. To ensure the useability, reliability, and validity of data to evaluate structural model data was cleaned by removing responses having a high number of missing values and constant/ unengaged responses. 317 responses were identified as the final sample to perform data analysis. If 1 or 2 missing responses exist in variables it has been imputed with the mean of the series. Outliers were detected for each item. The normality of the latent construct is measured by skewness and kurtosis values for each item with the values ranging between -1.96 to +1.96 with benchmark values at 0.05 level of significance (Hair et al. 2015). Further, the data is analyzed through Exploratory Factor Analysis (EFA) and the Correlation matrix is used to check multi-collinearity among identified constructs with a benchmark to judge multi-collinearity if the correlation is more than 0.90 (Kline, 2005). Further CFA was conducted to examine whether the identified dimensions fit the Indian perspective.

The socioeconomic profile of these 317 responses which were used for subjected to data analysis is as follows:

##### 5.2 Socioeconomic Profile of Respondents

As per the age category sample of 317 was used in the study 3.2% (n = 10) sample belong to the age group of 15 to 17 years, 21.1% (n = 67) in the age group of 18 to 20 years, 74.8 % (n=237) belong to the age group of 21 to 23 years whereas only 0.9%(n=3) were of 24 years or greater in age. Qualification 1.3% (n=3) were 10th pass, 18% (n=57) were 12th pass and 80.8%(n=256) belonged to the others category. 16.1% (n=51) of the respondents have a monthly family income less than 5000, 30% (n=95) have a monthly family income between 5001 to 10000, 24.6% (n=78) have a monthly family income lying between 10001 to 15000 and 15.5%(n=49) have monthly family income between 15001 to 20000 and 13.9% (n=44) have monthly family income more than 20000. 94.6% (n=300) of 317 women participants have less than 5 members in their family whereas only 5.4% (n=17) have 5 to 8 members in their family with 38.8% (n=123) have only 1 member earning in the family, whereas 57.1% (n=181) and 4.1% (n=13) have 2 and 3 members earning in the family respectively. Out of 317 respondents, 84.9% (n=269) were married and only 15.1%(n=48) were unmarried. 62.1% (n=197) have undertaken training after getting inspired by friends, 26.2% (n=83) from a family member and 4.4% (n=14) from government advertisements and 7.3% (n=23) stated others as the reason. 50.78% (n=161) and 49.21% (n=156) of the respondents have undertaken formal training and informal training respectively.

##### 5.3 Exploratory Factor Analysis

The present study involves exploratory factor analysis of indicators of women empowerment for employed women after completing training. To identify variables, factors were identified through exploratory study of available literature. To formulate scale, these variables were subjected to exploratory factor analysis. The items having absolute factor loadings greater or equal to than 0.50 are retained. Thus, items which has absolute factor loadings smaller than 0.50 were dropped as these items are considered to meet the minimal level of interpretation of structure; absolute factor loadings 0.50 or more are considered practically significant and absolute factor loading exceeding 0.7 are considered indicative of well-defined structure (Hair et al., 2015). Also, variables which are cross-loading with another factor are deleted to derive an improved and well-defined structure. The application of EFA was to condense the original number of variables to a smaller set of new composite factor structures with fewer dimensions/factors with a minimum information loss. The factors thus emerged are named after.

The final exploratory factor analysis result for women's empowerment are as follows:

The measure of sampling adequacy i.e., Kaiser- Meyer-Olkin (KMO) measure which evaluates the proportion of variance in observed variables that might be caused by underlying factors is 0.879 which is above .65 (threshold limit) for women empowerment. Thus, items on women's empowerment are appropriate to conduct an exploratory factor analysis. Bartlett's Test of Sphericity tests the significance of overall correlation among the items used for EFA, which was found to be significant with chi-square = 3581.027, p=0.000, for constructs of women empowerment indicating that EFA can be performed on the given set of data. The EFA derives five components for women empowerment whose eigenvalue is greater than 1. These five constructs explain a total of 71.225 % of variance, The Varimax rotation refines the factor structure of women's empowerment. Five factors were identified through EFA and labelled based on the characteristics of the items clubbed under each factor based on factor loadings. They were named Economic Empowerment (EE), Family Health and Well Being (FHWB), Civic Empowerment (CE), Social Empowerment (SE), and Educational Empowerment (EE). Also, Cronbach's Alpha values of these factors are given in Table 1.

## 5.4 Reliability

Reliability is an assessment of the degree of consistency between multiple measurements of a variable. (Hair et al., 2018). The most used measure of reliability is internal consistency, which applies to the consistency among the variables in a summated scale. The rationale for internal consistency is that the individual items or indicators of the scale should all be measuring the same construct and thus be highly intercorrelated. No single item is a good measure of a concept; thus, we rely on item-to-total correlation, Cronbach Alpha, Construct reliability and average variance extracted (calculated in confirmatory factor analysis). Threshold values for item-to-total correlation exceed 0.5, Cronbach Alpha agreed upon limit is 0.7 although 0.6 is acceptable in exploratory research, Construct reliability should be more than 0.60 and Average Variance Explained should be over 0.50 (Hair et al., 2018).

## 5.5 Confirmatory Factor Analysis

First-Order Confirmatory Model of Women Empowerment: First order confirmatory model was formulated to test the structure of women's empowerment and establish the reliability and validity of the scale. Accordingly, the goodness-of-fit of the model given in Figure 1 was tested in comparison with alternative models. The structure derived from EFA was then subjected to CFA on a data set of 317 respondents. Output of the first-order CFA model is given in Figure 1. A combination of absolute, incremental and parsimony fit indices are used to evaluate the goodness of fit of the preliminary model such as chi-square ( $\chi^2$ ) statistics, chi-square/ df (CMIN/DF), the root mean squared error of approximation (RMSEA), Comparative Fit Index (CFI), Tucker-Lewis Index (TLI), and Normed Fit Index (NFI). The goodness of fit indices for the confirmatory model given in Figure 1 is as follows:

Chi-square ( $\chi^2$ ) statistics is 290.797, chi-square/ df (CMIN/DF) is 1.817, RMSEA is 0.051, CFI is 0.962, TLI is 0.955, and NFI is 0.921.

Table 1 shows that the average variance extracted (AVE) of all five latent constructs of women empowerment is greater than the threshold value of 0.5 (Hair et al. 2015). Construct reliability (CR) for all four constructs is greater than the threshold value of 0.7 (Hair et al. 2015). Discriminant Validity is established if variance estimates are greater than the squared correlation estimate (Fornell & Larcker, 1981). Here the square root of the AVE for FHWB is less than the absolute value of the correlations with another factor thus discriminant validity cannot be established. To modify the preliminary model, modification indices and factor loadings of the constructs are used. Firstly, large modification indices were used to diagnose problems with specific items. Secondly, modification indices were used for factor loading that was used to identify the one-dimensionality of the construct, those items were dropped from the preliminary model to achieve the final first-order CFA model with a better fit as given in Figure 2

The output of the final first-order CFA model is given in Figure 2. The goodness of fit (GOF) indices of the measurement models were Chi-square ( $\chi^2$ ) statistics is 257.046, CMIN/DF is 1.810, the RMSEA is 0.051, CFI is 0.966, TLI is 0.959, and NFI is 0.924. All observed GOF indices were found to be significant as per threshold values except  $\chi^2$  value (Bagozzi & Yi, 1988; Bentler & Bonett, 1980). Standardised loading of final first-order CFA is given in table 1.

Second-Order Confirmatory Factor Analysis: The factor structure of this study is hypothesized and examined. Based on the results of the second-order CFA in the construct of the measurement model for the achievement of women empowerment, a path diagram is obtained which is shown in Figure 3. Standardized loadings corresponding to second-order CFA for each variable are given in Table 1. Results of the model suitability test in the second order, GOF measures indicate a good model fit for measuring women's empowerment (Table 2). Thus, it can be concluded that the construct measurement model has met the goodness of fit statistical requirements. The path coefficient for women empowerment varies between sub-constructs: Economic Empowerment (EE) is 0.825, Family Health and Well Being (FHWB) is 0.874, Civic Empowerment (CE) is 0.292, Social Empowerment (SE) is 0.348, and Educational Empowerment (EduE) is 0.653. The second-order measurement model for achievement goals also shows acceptable model suitability, Chi-square ( $\chi^2$ ) statistics is 296.854, chi-square/ df (CMIN/DF) is 2.019, RMSEA is 0.057, CFI is 0.955, TLI is 0.948, and NFI is 0.916. The second-order CFA test results for the five-factor model are also hypothesized to be very good based on GOF criteria and the model is acceptable (Table 2).

**Table 1: Exploratory and Confirmatory Factor Structure of Women Empowerment along with reliability analysis**

Constructs for Women Empowerment	Variables	Communalities	Measure of Sampling Adequacy (MSA)	Factor Loadings	Corrected Item-Total Correlation	Reliability			CFA Output	
						Cronbach's Alpha	Construct reliability (CR) $\geq 0.6$	Average Variance Extracted (AVE) $\geq 0.5$	Standardized Loadings for first order CFA	Standardized Loadings for second order CFA
Economic Empowerment (EE)	Q3 I am capable to support the family.	0.803	0.871	.834	0.760	0.898	0.825	0.541	0.885	0.886
	Q4 There is an Increase in my ability to make decisions regarding the utilization of money/credit.	0.739	0.910	.826	0.816				0.773	0.773
	Q5 I can support my family better during economic crisis	0.733	0.907	.787	0.742				0.801	0.800
	Q2 I can Increase the creation of personal assets.	0.730	0.880	.776	0.767				0.838	0.839
	Q7 I can take decisions for my family.	0.582	0.947	.621	0.655				0.701	0.700
	Q21 I bring up my children without any discrimination of boy or girl.	0.684	0.909	.784	0.684				0.738	0.739
	Q19 Whenever an important financial decision has to be taken, I am also consulted.	0.670	0.879	.750	0.671				0.789	0.789
Family Health and Well Being (FHWB)	Q20 Me and my husband freely discuss about family planning.	0.684	0.886	.736	0.660	0.840	0.900	0.643	0.749	0.749
	Q22 I am aware about the rights and privileges provided for women by the Indian Constitution.	0.690	0.935	.725	0.712				0.772	0.772
	Q23 I encourage to fight against women atrocities, exploitation, and other problems of women.	0.463	0.919	.603	0.532				DROPPED in CFA	
	Q15 The decisions regarding children are also discussed with me.	0.790	0.862	.871	0.796				0.899	0.901

Civic Empowerment (CE)	Q14 My husband and children take care about my health.	0.835	0.827	.897	0.840	0.911	0.849	0.532	0.854	0.853
	Q13 I, along with my husband plan budget for the household.	0.802	0.857	.873	0.805				0.852	0.853
	Q12 I take care of the decisions pertaining to my household chores.	0.746	0.891	.835	0.759				0.798	0.795
Social Empowerment (SE)	Q10 I am being valued by family members in crucial decisions	0.676	0.832	0.805	0.647				0.719	0.730
	Q8 People in my community recognize me with my worth.	0.696	0.832	0.798	0.667	0.825	0.913	0.725	0.759	0.760
	Q9 I readily participate in community activities	0.674	0.862	0.785	0.653				0.745	0.736
Educational Empowerment (EduE)	Q18 The management of family is easy if I am in good health.	0.641	0.869	0.744	0.631				0.721	0.718
	Q28 I have freedom to choose the course I want to pursue	0.836	0.797	0.853	0.653	0.790	0.792	0.656	0.770	0.768
	Q27 I have complete freedom in deciding as to what I have to study.	0.813	0.833	0.811	0.653				0.847	0.851

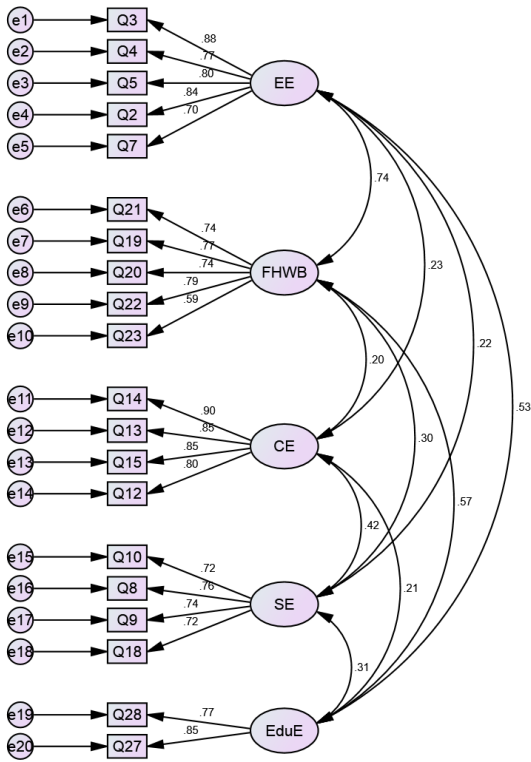


Fig. 1 - The output of the first-order CFA model for Women Empowerment

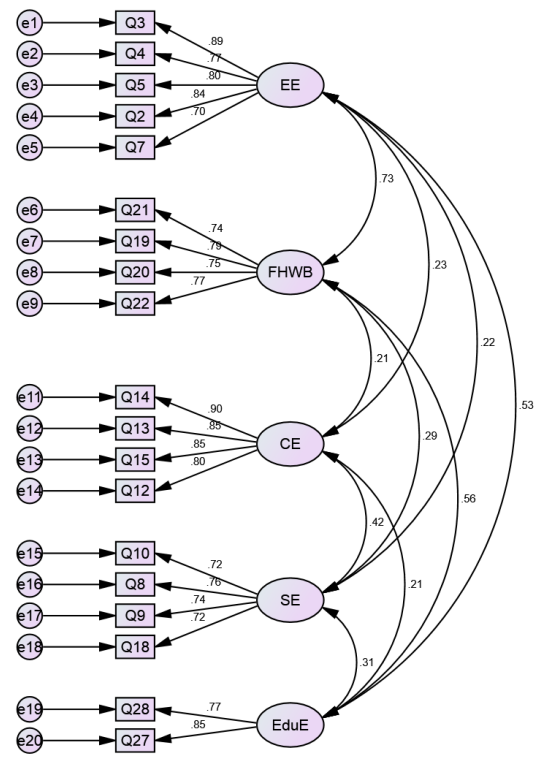


Fig. 2 - Final first-order CFA Output for Women Empowerment

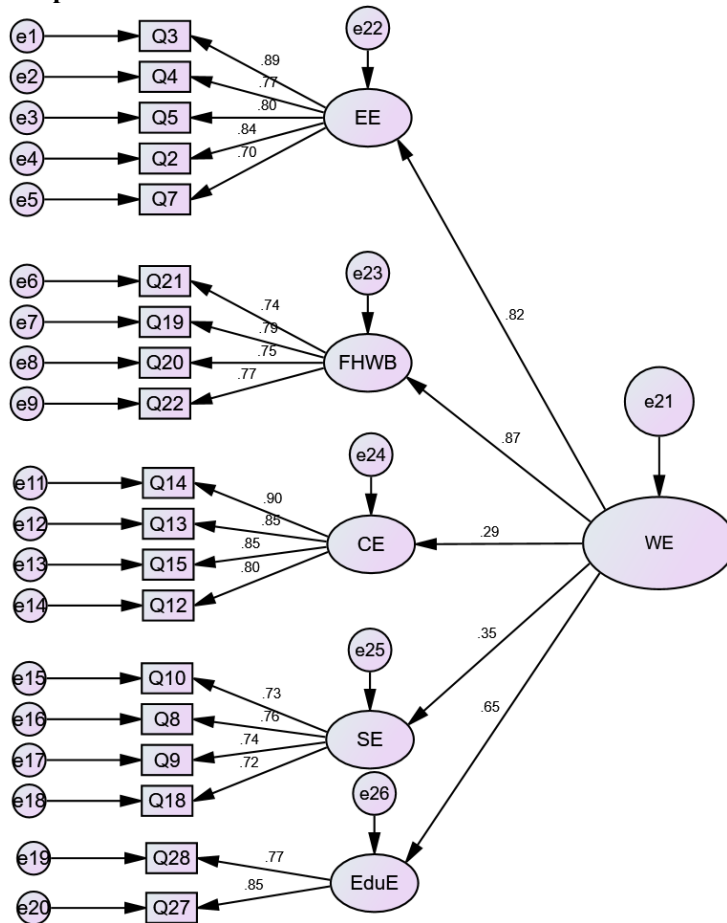


Fig. 3 - The second-order CFA



**Table 2 - Summary of GOF of Confirmatory Models**

Model fit Criteria	Parameter	Output		Threshold Value* N > 250 12 < m < 30	Decision
		First-Order CFA	Second-Order CFA		
Result (Default model)	Chi-Square	257.046	296.854	—	—
	Df	142	147	—	—
	P Value	0.000	0.00	≥ 0.05	—
	P.CMIN/Df	1.810	2.019	≤ 3.00	Good Fit
Absolute Fit Indices	RMSEA	0.051	0.057	≤ 0.07	Good Fit
Incremental Fit Indices	IFI	0.966	0.916	≥ 0.90	Good Fit
	TLI	0.959	0.948	≥ 0.95	Good Fit
	CFI	0.966	0.955	≥ 0.94	Good Fit
	RFI	0.912	0.902	≥ 0.05	Good Fit
Parsimonious Fit Indices	PNFI	0.770	0.787	≥ 0.5	Good Fit
	PCFI	0.802	0.821	≥ 0.5	Good Fit

Note: \* N is the number of observations, and m is the number of observed variables as per Hair et al. (2018).

Data were imputed for all unobserved constructs for various parameters for women empowerment: Economic Empowerment (EE), Family Health and Well Being (FHWB), Civic Empowerment (CE), Social Empowerment (SE) and Educational Empowerment (EduE). Thus, the following hypotheses are formulated.

H<sub>1</sub>: There is no significant difference between Economic Empowerment (EE) of formally / informally trained female workforce.

H<sub>2</sub>: There is no significant difference between Family Health and Well Being (FHWB) of formally / informally female workforce.

H<sub>3</sub>: There is no significant difference between Civic Empowerment (CE) of formally / informally trained female workforce.

H<sub>4</sub>: There is no significant difference between Social Empowerment (SE) of formally / informally trained female workforce.

H<sub>5</sub>: There is no significant difference between Educational Empowerment (EduE) of formally / informally trained female workforce.

From Table 3 it can be observed that the mean of formally trained women for each construct is higher than informally trained women. All the constructs were subjected to T-test to check the hypothesis, and no significant difference between women empowerment (WE) neither in both formally and informally trained women nor on parameters of women empowerment: Educational Empowerment (EduE), Social Empowerment (SE), Civic Empowerment (CE), Family Health and Well Being (FHWB), Economic Empowerment (EE) was observed as deputed in Table 4: H1, H2, H3, H4, H5 are accepted. It can be inferred that the type of training has no significant impact on women's empowerment and its parameters.

**Table 3 - Mean of Identified Constructs**

	Type of Training	N	Mean	Standard Deviation
Women Empowerment (WE)	Formally Trained	161	3.7534	0.64365
	Informally Trained	156	3.6766	0.59585
Educational Empowerment (EduE)	Formally Trained	161	3.6525	0.55019
	Informally Trained	156	3.5944	0.52098
Social Empowerment (SE)	Formally Trained	161	2.6120	0.77654
	Informally Trained	156	2.4922	0.84569
Civic Empowerment (CE)	Formally Trained	161	3.2137	0.82148
	Informally Trained	156	3.1275	0.76561
Family Health and Well Being (FHWB)	Formally Trained	161	2.1420	0.82148
	Informally Trained	156	2.1382	0.76561
Economic Empowerment (EE)	Formally Trained	161	4.1373	0.67040
	Informally Trained	156	4.0994	0.60252

**Table 4 - Independent Sample T test**

		Levene's Test for Equality of Variances		t-test for Equality of Means		
		F	Sig.	t	df	Sig. (2-tailed)
Women Empowerment (WE)	Equal variances assumed	3.146	.077	1.408	315	.160
	Equal variances not assumed			1.411	311.970	.159
Educational Empowerment (EduE)	Equal variances assumed	3.038	.082	1.035	315	.301
	Equal variances not assumed			1.037	311.812	.300
Social Empowerment (SE)	Equal variances assumed	1.610	.205	1.647	315	.100
	Equal variances not assumed			1.649	314.451	.100
Civic Empowerment (CE)	Equal variances assumed	1.078	.300	1.891	315	.060
	Equal variances not assumed			1.893	314.760	.059
Family Health and Well Being (FHWB)	Equal variances assumed	1.001	.318	.047	315	.963
	Equal variances not assumed			.047	310.094	.963
Economic Empowerment (EE)	Equal variances assumed	3.078	.080	.530	315	.597
	Equal variances not assumed			.530	313.947	.596

## 6. Discussion

Women's empowerment is important for both the social and intellectual development of females along with the overall development of the country. It becomes more important for a developing country like India. Quantifying a qualitative item like women's empowerment is difficult and necessary as it influences policymakers. This paper aimed to understand women's empowerment. The research undertaken in this paper tries to operationalize women's empowerment from the perspective of vocationally trained working women. It involved two categories of women, Category 1 (women formally trained in the National Capital Region (NCR)) and Category 2 (women informally trained in the National Capital Region (NCR)) with the sample being distributed equally. The State of Education Report for India 2020 for TVET also emphasizes training being of three types- formal, non-formal and informal. The report mentions that women who receive formal training are low in comparison to informally trained women.

The socioeconomic profile of the sample revealed that most women belong to the age category of 21-23 years and are married. Less than one-fifth of the respondents completed their senior secondary examination. Most of the respondent's family size was less than five. Around one-third of the respondents have a family income of 5000-10000. Most of the respondents join the training programme at the behest of their peers. The study revealed and confirmed factors of women's empowerment. They were Economic Empowerment (EE), Family Health and Well Being (FHWB), Civic Empowerment (CE), Social Empowerment (SE) and Educational Empowerment (Edu E). Focusing on these five dimensions will help us understand women's empowerment in a better manner, which is a process not only an outcome. With Family health and well-being along with economic empowerment being the two most important factors of women empowerment Amber et al. (2021), Chinen (2017) and Elsayed & Roushdy (2017) supported the claim that the key factors of women empowerment are participation in economic activities, decision making power in the family. Pal & Gupta (2022), Obayelu & Chime (2020) and Huis et al. (2017) endorse that social empowerment and education lead to sustainable women empowerment. The mechanism to control resources does not inevitably lead to female empowerment, but it can act as a catalyst for the same. It was observed that mean scores of all the constructs of women empowerment for formally trained respondents were higher than for informally trained respondents. The most important factors were educational empowerment followed by Economic and Civic Empowerment. But no significant difference between women empowerment, and constructs of formally and informally trained women was observed.

Huis et al. (2017) also suggest that three-dimensional model of women's empowerment involving personal, relational, and societal dimensions of women empowerment. Rowlands (1997) also suggested the empowerment of women occurs at three levels personal, relational, and collective. All these should be considered collectively to examine women's empowerment. Sowjanya & Hans (2015) state that education plays an important role in the empowerment of females and providing them requisite skills, knowledge, and self-confidence for being a total partner in the development process. The government needs to focus on providing formal training and self-help groups can also provide the necessary impetus to train more numbers. Hence collaborative roles by government and society would enable sustainable empowerment.

## 7. Conclusion

Female Empowerment is a significant driver for economic growth and societal prosperity. It includes enhancement in the political, societal, economic, educational and health positions of women. Research states that benefits of women empowerment extend not only to their families but also communities in terms of improved children's education, health, and heightened competitiveness on human development indicators. Under the Sustainable Development Goal (SDG) -4, quality education where technical and vocational skill for employment, jobs and entrepreneurship has been focused not only in India but the world over and under SDG-5, India has stated that it will ensure women and girls contribute as equivalent partners to growth and development of the country by 2030. At the global level too, it has been observed that if women participate equally with men in economic activity, the world will add \$11 trillion to the annual 2025 GDP. Investing in education and skill enhancement can help in their empowerment. Runde & Ramanujan (2020) state that GER at the university level of higher education in the case of India is 23 per cent as compared to developing countries' average of less than 40 per cent.

The economic contribution and empowerment of women are pertinent to strengthening female rights to enable them to have control over their lives and influence society too. Sustainable development can be achieved through the economic empowerment of women. Empowered women and gender equality lead to multiplying development efforts. Hence focusing on providing opportunities for learning and training be it formal or informal will increase their ability to contribute effectively to society.

With the far-reaching benefits of women's empowerment, it becomes imperative for the government to focus on enhancing their skills through promoting vocational training for women and aiding in their employability. Governments across the world are addressing this issue. The creation of skill universities, skill councils, integration of skill education with school education, and promotion of self-help groups can yield better results.

## Acknowledgement

The minor project on which the present paper is based was funded by the IMPRESS Scheme of the Indian Council of Social Science Research. However, the responsibility for the facts stated, opinions expressed, and conclusions reached is entirely that of the author(s) and not of the Indian Council of Social Science Research.

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