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Impact of Literacy and Skill Trainings on Empowerment of Women: A Case Study of Naushahro Feroze

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ABSTRACT

This study examine the impact of adult literacy and occupational skill development on economic empowerment in Naushahro Feroze, Sindh Province, Pakistan. Women's empowerment is seen as a primary driver of economic progress across the world. Economic progress and women's empowerment are inextricably linked, with a reciprocal relationship. The current study employs a quantitative methodology. To conduct quantitative analysis, data was collected using a standardized data collecting tool/question Seven variables were chosen to explore the relationship between literacy, skil development, and women's empowerment. A total of 240 respondents were used, divided into two groups: control and treatment/intervention. Three independent factors were used to predict the dependent variable, the economic empowerment index. The Women's Economic Empowerment Index model indicates that enhancing women's literacy and skil sets significantly enhances their empowerment, with skill development and literacy being particularly beneficial. The study concluded that various sorts of program suppor contributed to increased women's empowerment, with those receiving literacy and skil training feeling more empowered.

KEYWORDS: Economic Empowerment, Literacy, Skill Development

Introduction

In this study, we analyze the impact of adult literacy and vocational skills training on economic empowerment of women in Pakistan. Though women empowerment is a complex concept with a broader range of definitions and context specific perceptions/dimensions, it is generally defined in terms of women's ability or power to influence decision making about their own lives, their families and the family resources. Moreover, empowerment of women can be viewed in economic, familial, social, political, legal and psychological dimensions (Malhotra, et al., 2002). Our study examines economic dimension of women empowerment. Women empowerment is considered as one of major determinants of economic development around the world. Economic development and women empowerment are closely related with each and there exists a two-way relationship between them. On one hand, development alone can foster women empowerment and on the other hand improving women's empowerment fosters economic development of a country (Duflo, 2012; Bhoganadam et al., 2014; and Roy et al. (2017). Improvement in women's empowerment not only increases wellbeing and welfare of a household but it also plays a key role in agricultural and general development of the rural areas of a country (Sell and Minot, 2018). Some studies have termed 'women empowerment' as one of the biggest tools for 'effective development' of any country and a major factor that helps women free themselves from vicious circle of social, political, economic and gender-based discrimination (Vyas, 2018).Women

empowerment is deemed necessary for socio-economic development of any society and sustainable economic growth and poverty reduction in developing countries (Ahmed, et. al., 2015); Klasen, 1999; and Vyas 2018). Given this role of women empowerment in socio-economic development, sustainable growth, agriculture development, poverty reduction, female welfare and women emancipation from various types of discrimination, a World Bank Policy Research Report has recognized women empowerment as an important policy goal (King and Andrew, 2001).The promotion of women's empowerment as a development goal is based on a dual argument: women empowerment is a major aspect of human development and welfare which makes it intrinsically a worthy objective to achieve; and secondly empowerment of women itself is a key determinant of other development objectives. The empowerment of women is, thus, both an end in itself and means to achieve other ends (Malhotra, et al., 2002).

Role of Adult Literacy and Skills Development in Empowerment of Women

The research around the world has not only focused on the role of women empowerment in fostering economic growth of countries, socio-economic development of societies, poverty reduction and enhancement in family welfare but it has also analyzed the factors affecting women empowerment itself. Multiple factors have been found to influence women empowerment in different countries and regions. Education; adult literacy; skill and vocational trainings; age; freedom of mobility; media exposure; women participation in economic activities; overall development; health; awareness of rights and participation are some of the key determinants of women empowerment (Oxenham et al., 2002; Ahmad and Sultan, 2004; Sridevi, 2005; Parveen, 2005; Heaton et al, 2005; Yusuf, 2013; Pachaiyappan, 2014; Johnson, 2017; Vyas, 2018; Eger et al., 2018; Pitambara and Choudhry, 2018; and Shetty and Hands, 2019). However, of all these determinants education, literacy and skills/vocational training have received greater recognition with respect to their impact on women empowerment. This paper aims at examining the effect of literacy and skills training on economic empowerment of women.

According to UNESCO, a person is functionally literate if he/she can engage in all those activities in which literacy is required for effective functioning of his/her group and community and also for enabling him/her to continue to use reading, writing and calculation for his/her own and the community's development (EFA Global Monitoring Report, 2005). Thus, the ability of an individual to read, write and do basic mathematical calculations for the benefit of himself/herself and the society is the essence of adult literacy. Stromquist (2009) defines literacy in terms of a set of cognitive skills necessary to make a meaning of print and communication....and used not only for efficient functioning in one's environment but also for individual and social transformation. Both of these definitions (EFA Global Monitoring Report 2005; Stromquist (2009) consider reading, writing and calculations as the direct outcomes or functions of literacy programs. Joint effect of these functional skills translates into individual and collective benefits. In 2015, UNESCO defined literacy in more comprehensive terms relating to a continuum of learning and proficiency levels which allows citizens to engage in lifelong learning and participate fully in a community, a workplace and a wider society. It includes the ability to read and write, to identify, understand, interpret, create, communicate and compute, using printed and written materials, as well as the ability to solve problems in an increasingly technological and information-rich environment.

This last definition of literacy is more inclusive and relevant with women empowerment as it covers almost all dimensions of the empowerment as it encompasses women participation and empowerment at all levels: individual, community and society levels as suggested on by Malhotra (2002). According to this definition, literacy is a major factor in women empowerment at all levels and in all dimensions. Research on the role of literacy in women empowerment reaffirms and validates this definition. Literacy, according to empirical studies, contributes positively in development of all dimensions

of women empowerment. For example, Stromquist (1997) found that literacy programs had a positive impact on the participants' confidence to socialize, self-esteem and environment awareness. This achievement of literacy programs contributes to social, familial and psychological dimensions of empowerment. Literacy also plays a key role in economic empowerment of women as is found in Heaton et al., (2005), Pachaiyappan (2014) and Mbah (2015). Whereas the state of deprivations and violence through which most women in the developing countries are passing is a by-product of low female literacy (Bhattacharya, 2014). Lower literacy is also associated with low participation of women in the political, economic and social activities.Alongside literacy, skill development is considered a major determinant of women empowerment. Skill development is achieved through technical and vocational education training (TVET). According to Finch and Crunkilton (1999), TVET enables people for a commercially viable employment and makes them more productive in various economically productive fields. It increases capabilities of people particularly women and widens their portfolio of choices in terms of self-employment and entrepreneurship development. Skill development, brought about by TVET, is considered a major determinant of sustainable social and citizenship development (UNESCO, 2004 and Jallah, 2004).This is the reason that the role of vocational skills training has widely been acknowledged by several social scientists around the world. For example, Parveen (2005) in a study on rural Bangladesh showing the positive impact of formal and informal education on empowerment of women finds that education and skill development not only enhance socio-economic conditions of women but they also enable women to assert and safeguard their various rights. Johnson (2017) in a research on empowerment of women in India found that vocational training programs played a key role in empowering the rural women. Sharma (2018) also provides evidence that vocational training programs can increase rural women's income resulting in their empowerment in India.The aim of skill development in case of women is not only to prepare them for jobs but also to improve the performance of women workers by enhancing the quality of work in which they are engaged (Pitambara and Choudhry, 2018). Skills development is a key to success which improves productivity, employability and earning opportunities. Itis the bridge between job and workforce. Today, it is considered as an important and indispensable tool for women empowerment (Vyas, 2018). Vyas (2018) also finds a positive link between skill development and women empowerment. The study argues that skill development not only creates employment opportunities but also empowers them. Pitambara and Choudhry (2018) argues that skills development is a key determinant of women empowerment in India. According to this study, skills development not only enhances women's employability but it also increases performance, productivity and quality of work of employed women.

Literature Review

There exists a fairly reasonable body of literature on various aspects of women empowerment in Pakistan. A mixed review of literature on women empowerment is presented here. Khan (2010) studied socio-cultural determinants of women empowerment in the Punjab province of Pakistan. Primary data was collected from 550 women of districts Faisalabad and Rawalpindi on a comprehensive questionnaire using multistage sample techniques. Mixed methods including quantitative and qualitative analyses were used in the study. Khan (2010) measures women empowerment through four dimensions that include control over economic resources, decision making within family, mobility and involvement of women in family discussion on various matters. Each of these dimensions was analyzed with a set of related questions. On the basis of responses on each dimension of the empowerment, four different indices were developed each focusing the respective dimensions of the empowerment. The study then merged the Economic Resource Index, Decision Making Index, Mobility Index and Discussion Index into a single Summative Empowerment Index (SEI) of women. The summative index was then used as a dependent variable in the analysis. This dependent

variable then analyzed/estimated on a large set of independent variables including household headship, family type, number of brothers of a respondent woman, education of the woman, age of the woman, total years of married age, observance of Purdah, paid job, household condition, family income, political participation, awareness about rights, social networking, cooperation of the husband, property and dowry received from parents, media exposure, religious tendencies and willingness for change. The findings of Khan (2010) show that most variables had a significant impact on women empowerment in the study area. Chaudhry et al., (2012) in an empirical research studied women empowerment in Pakistan with special reference to Islamic view point. The primary data, comprising 200 samples of women respondents, was collected through simple and stratified sampling techniques from three tehsils of Dera Ghazi Khan- one most underdeveloped districts of the Punjab province of Pakistan, for analyzing women empowerment. The study used descriptive analysis and ordinary least squares (OLS) regression techniques to find the impact of various variables on women empowerment. The major explanatory variables used in the analysis include: education of respondent women, education of family head and family members, paid work, access to health facilities, women ownership of economic assets, exposure to media, family size, socio-cultural structure, fear of physical/mental abuse from male members of the house. The estimation findings reveal that except fear of violence, family size and cultural norms, all other variables exert a significant positive impact on women empowerment. Bushra and Wajiha (2013) terms education as one of the key determinants of empowerment of women with respect to Pakistan. Further the study considers economic participation, economic opportunity, social and cultural inclusion and poverty as some other factors of women empowerment in addition to education. Bushra and Wajiha (2013) in one of the few studies on Pakistan which have focused on assessment of the determinants of women empowerment. The study is based on primary data collected from two different women colleges from Lahore with a sample of 200 respondents. The study used five variables as the determinants of women empowerment including education, social and cultural issues, economic participation, economic opportunity and poverty. The results of the study reveal that economic opportunity, economic participation, poverty have significant impact on empowerment of women whereas the impact of education and socio-cultural issues is insignificant.

Awan and Zertashia (2015) studies the factors affecting women empowerment in an underdeveloped area like Dera Ghazi Khan in southern Punjab. The study uses a cumulative women empowerment index as a dependent variable and regresses on multiple independent variables like education of a woman and her family, age, per capita income, bank account, woman ownership of assets, family size, family type, fear of violence. Using primary data collected randomly from 200 respondents and applying ordinary least squares method, the study finds media exposure, bank account and formal employment exert a statistically significant positive impact on empowerment of women whereas fear of violence and family structure are inversely related with women empowerment.

Awan and Naqvi (2016) studies determinants of women empowerment in Pakistan and defines empowerment of women in terms of the power of a woman to influence decisions about her education and about her family size/ number of children. Applying a binary logistic regression model on a large data set from Pakistan Standard Living Measures (PSLM) 2011-2012, the study uses a separate model for both dimensions of the empowerment i.e. decision of women about her education, and decision of women about more children. Both of these indicators are used as dummy dependent variables taking values 1= if a woman feels empowered to take decision and 0= if not empowered to take the decision on her own. Both variables are regressed on a set of independent variables including women's current age, age at marriage, education, employment, type of institution studied, number of children, urban or rural setting and province. Education, age, type of educational institution and employment have

significant positive impact on women empowerment. Ashraf and Ali (2018) studies the impact of socio-economic wellbeing on women status in Pakistan. However, instead of using women empowerment as a dependent variable this study uses gender inequality index (*GII*) as a dependent variable and regresses it on globalization, human development index, economic deprivation, secondary school enrollment and financial development. Using annual time series data 1980 to 2014, the study applies Autoregressive distributed lag (ARDL) and Vector Error Correction Model (VECM) approaches for long-run and short-run relationships among the variables respectively. Globalization and economic deprivation have a significant long run impact on gender inequality which implies that increases in globalization and economic deprivation belittles women's status in Pakistan.

Israr et al. (2020) is the only study that examines the impact of some initiatives on women empowerment in Pakistan. The study analyses impact of Benazir Income Support Program (BISP)on women empowerment in two villages of Mohmand district of Khyber Pakhtunkhwa province of Pakistan. This study constructs one cumulative women empowerment index and five individual empowerment indices including economic, social, legal, physiological and decision making indices. This index uses almost all dimensions of women empowerment suggested in Malhotra (2002) except the political and psychological dimensions. The study reported mixed results for the two villages on different indices.

Our research is based on gaps and limitations of research studies on women empowerment and its determinants with respect to Pakistan. The brief review of literature on Pakistan presented above brings to one's notice multiple research gaps to be filled. Firstly, there is no study on women's literature that has exclusive focus on economic empowerment of women. Similarly, no study has been carried out in Pakistan to examine the impact of some development project / program on women empowerment using women indices except Israr et al. (2020) which analyses the impact of BISP on women empowerment. However, even this study is also limited since it uses data from only two villages with a small sample of only 150 respondents and does not use all dimensions of women empowerment. Thirdly, there are no studies on Pakistan to simultaneously analyze the impact of skill and literacy on women empowerment. These are only some general studies focusing on what determines women empowerment in Pakistan.

No study in Pakistan's context uses two groups of respondents i.e. treatment or intervention group (literate and skilled respondents) and the control groups (the respondents who do not receive any treatment or intervention) to account for differential impacts of both women empowerment. We use a dummy variable model to compare the impact of treatment and control groups on the empowerment of women in Pakistan. No study has ever used a dummy variable approach to present a relative impact of two groups/strata.

Material and Methods

Quantitative, qualitative and mixed methods are the most used methodological approaches in social science research. We apply quantitative method in the present study. In order to make quantitative analysis, a structured data collection tool /question was used for data collection. The tool was adopted from Khan (2010) for the present study. However, it was greatly modified and changed to provide for the context specific needs of our research. Based on data collected on the structured questionnaire, dependent and independent variables are constructed for regression analysis.

The research has been conducted in district Naushahro Feroze of Sindh Province of Pakistan. As the present study aims at evaluating the impact of literacy and technical

training programs on empowerment of women in district Naushahro Feroze, all literacy graduates of NCHD established adult literacy programs are the target population of the present study. As many as 48,354 women have passed out from these literacy centers from 2005 to 2018. However, our sample size is 240. The selection of the sample size is based on criterion of convention in which selection of sample size is based on similar studies on the same theme.

A mixed set of sampling techniques is applied in the present study. Firstly, a multistage random cluster sampling is used to select the geographical setting of the study. At first stage, one district i.e. Naushahro Feroze was selected purposively out of 29 districts of Sindh province of Pakistan.

There were two purposes to select Naushahro Feroze for the study. Firstly, it was one of the four districts- others being Ghotki, Badin and Thatta, where National Commission for Human Development(NCHD) started its human development operations including adult literacy in 2001. Secondly, one of the scholars belongs to this district and works as a general manager of NCHD. At second stage, two talukas i.e. Kandiaro and Naushahro Feroze were selected using simple random sampling techniques. At the third and final stage two union councils from each Taluka were selected randomly for ultimate selection of respondents i.e. sampling units.

However, after selecting geographical areas for the study, next methodological problem was selection of 240 respondents for ultimate research analysis. In selection of sampling units, the stratified sampling technique is applied. As the present study aims at estimating the impact of literacy and skill training on empowerment of women, we decided to divide the entire sample into two subsamples, strata or groups i.e. treatment group and control group. The treatment group also known as experimental or intervention group refers to the group which receives some sort of treatment or intervention whose effect is being evaluated. Graduates of literacy and skill training programs thus belong to the treatment group in the present study as we want to study the impact of literacy and technical training programs on these graduates. The other group is the control or comparison group which refers to those who have neither received any treatment nor benefited from any intervention. In the control group method, a population which benefits from some program or support, say, literacy, vaccination or microcredit is compared to a population which does not. Many studies including Mosley (1997), Olken (2007), Bate and Karp (2014) and Lombardini et al., (2017) have used this method.

This study follows this control group method. Disproportionate stratified sampling technique is applied. Firstly, the sample of 240 is divided into equal groups: Control group 120 and treatment group 120. However, treatment group is further divided into more groups i.e. Literacy and Skill Training Groups each with 60 respondents. The first group has received single treatment i.e. only literacy training whereas the latter one i.e. skill group has got double treatment i.e. literacy as well skill training. Therefore, it is hypothesized that women who have received double treatment should be more empowered than the ones who got single treatment and got no treatment at all i.e. control group. Data generated from this type of method is analyzed by comparing the means of one group with that of the other (Bate and Karp, 2014).

Out of 120 sample size in control or comparison group, a sample of 30 respondents was selected from each of four union councils i.e. Padidan and Phul (Taluka Naushahro) and Darbelo and Kamal Dero (Taluka Kandiaro) from the villages of women of treatment group. Similarly, for the selection of a sample of 60 literate and 60 skill women, 15 respondents were selected from the four union councils. Both strata or groups of women were selected from the same villages to make the comparison possible. The table 3.1 shows union council-wise distribution of sample.

Table 1
Union Council (UC)-wise Sample Selection

No	Taluka	UC	Skilled Trainees	Literacy Graduates	Untreated Sample	Total
1	Naushahro Feroze	Kamal Dero	15	15	30	60
		Dabhero	15	15	30	60
2	Kandiaro	Padidan	15	15	30	60
		Phul	15	15	30	60
Total	2	4	60	60	120	260

Measurement and Construct of Variables

As the title of the study "Impact of Literacy and Skill Trainings on Economic Empowerment of Women" suggests literacy and skill trainings are independent variables and women empowerment is a dependent variable. Jointly the two variables make an intervention or treatment group. Another independent variable is created from the control group or comparison group to account for the differences of impact amongst the different groups on women empowerment. A dummy variable is used for each independent variable. We use 1 if the respondent belongs to a particular group and 0 if not.

However, there is no directly observable data on dependent variable i.e. women economic empowerment. Therefore, women's economic empowerment is measured through a set of various indicators. In other words, an index of women's economic empowerment is constructed for use in regression analysis. The index for economic empowerment of women is developed on the basis of seven indicators.

Women's Economic Empowerment Index

Economic dimension of empowerment of women was evaluated on basis of seven indicators.

$$WEEI_i = \frac{X_{1i} + X_{2i} + X_{3i} + X_{4i} + X_{5i} + X_{6i} + X_{7i}}{7}$$

3.2.1

Where:

$WEEI_i =$ Economic empowerment index of women in *ith* group

X1 = Are you currently involved in any paid work?

X2 = Do you think that women should be involved in paid work?

X3 = Do you have a say in routine household spending?

X4 = Do you have any control over the use of family saving?

X5 = Do you own and control household valuables?

X6 = Do you have a bank account?

X7 = Have you ever obtained an institutional loan?

Data on dependent variables i.e. women's economic empowerment index has been created using above indicators/questions.

Empirical Regression Analysis Model

The economic empowerment index has been used as a dependent variable in our analysis. Whereas literacy and skill trainings have been used as explanatory/independent variables. In regression analysis, the dependent variable is explained by both quantitative variables such as consumption, taxes, interest rates .... etc. and qualitative variables such color, sex, language, geography, education, training, ... etc. (Gujarati, 2004).

For example, holding other factors constant, rural women are found to be less engaged in paid work/jobs than their urban counterparts. These variables are essentially qualitative variables because they indicate the presence or absence of a quality or an attribute. Such attributes are quantified by constructing artificial variable that takes on values 1 or 0 where 1 indicates presence of a characteristic or attribute and 0 shows its absence. For instance, if we want to see if a particular woman has a bank account, the dummy variable will assume a value of 1 if that woman has a bank account and 0 = if she has none. The variables that take such values are termed as dummy variables. The models that may contain quantitative and qualitative variables are called ANOVA models (Gujarati, 2004). The general form of the dummy variable model (ANOVA) estimated is given in 3.9.1.

$$Y_i = \beta_1 D_{1i} + \beta_2 D_{2i} + \beta_3 D_{3i} + u_i$$

                                                                                      3.3.1

Where:

Y_i = is average empowerment index of women in *ith* group/category

D_{1i} = 1 if the woman is in the control/comparison group = 0 otherwise (i.e., in other groups)

D_{2i} = 1 if the woman is in the literacy group   = 0 otherwise (i.e., in other groups)

D_{3i} = 1 if the woman is in the skill group   = 0 otherwise (i.e., in other groups)

Each dummy variable i.e., D_i represents a particular group or category to be analyzed. As there are three groups in our study, each dummy variable stands for one specific category. Bs present average empowerment index of women in a particular group. B_1, B_2 and B_3 show average empowerment indices of women in the control group, literacy group and the skill group respectively. The index can take values between 0 and 1. The two extreme values of the index represent two extreme cases i.e. 0 implying no empowerment at all and 1 implying complete empowerment. In most practical cases, the value of the index lies between these two extreme cases implying partial empowerment. Following specific regression equation has been estimated to evaluate the impact of literacy and skill development on economic empowerment of women.

$$WEEI_i = \beta_1 D_{1i} + \beta_2 D_{2i} + \beta_3 D_{3i} + u_i$$
3.3.2

The above dummy variable model has been estimated by applying ordinary least squares method (OLS).

Results and Discussion

In this section, we present the results and subsequent discussions on the research. The results are based on the data which was collected and organized using the scientific methodology described in the methodology section. This section presents the quantitative findings of the research. Descriptive analysis is presented in the first sub section whereas the second section presents regression analysis results based on economic empowerment index.

Descriptive Analysis of Economic Empowerment Index

Economic empowerment of women is a major component of overall women empowerment. Seven questions or indicators were used to measure economic empowerment of women in this study. One of the most important indicators of women empowerment is women's involvement in paid work or job (Heaton et al, 2005; Khan, 2010; and Chaudhry et al., 2012). We asked respondents in all sampling categories whether they were involved in any paid work. The table 4.1. shows number and percentage of respondents who gave positive responses i.e. said yes to the questions/indicators related to economic empowerment of respondents. Our survey data reveals that no woman in the untreated group was engaged in such work or job whereas 30 percent of literacy graduates had some sort of paid work/jobs. However, all skill graduates (100%) were involved in paid work. They were running tailoring/stitching businesses from their respective households. Our survey not only checked the current involvement of respondents in paid work, but it also enquired whether they were in favor of women engagement in such work. Around 40 percent untreated women were in its favor and a big 60 percent were against it. In the literacy group 90 percent women were in favor of women's work outside their homes. Next indicator that was used in economic empowerment was women's say in making household expenses. Specifically, respondents were asked whether it was the wife or someone else who made routine family expenditures. In 88.33 percent cases, in the skill group, it was the wife who made household expenditures while this percentage for untreated women was only 44.17 percent. While in literacy group, 70 percent of household expenditures were made by women. Another related question in economic empowerment was about the use of family savings. Only 10 percent of women could use their family's savings for any purpose. While 68.33 and 38.33 percent women respectively in the literacy and skill group could utilize savings when and if needed. Next, the survey analyzed ownership and control of household valuables by wife. Only 12.50 percent women in the untreated sampling category had ownership and control on some household valuables. While women in two treated groups (46.67 % and 58.33% in literacy and skill group respectively) were relatively in a better position regarding ownership of and control on household values.

Table 2
Number and percentage of (Yes) answers to the questions/indicators related to economic empowerment of respondents

S. #	Indicator	Untreated Sample =120		Literacy Graduates =60		Skill Trainees = 60	
		Number	Percent	Number	Percent	Number	Percent
1	Involvement in paid work?	0	0.00	18	30.00	60	100.00
2	Should women be involved in paid work?	47	39.17	54	90.00	60	100.00
3	Household spending by wife	53	44.17	42	70.00	53	88.33
4	Use of Saving by wife	12	10.00	41	68.33	23	38.33
5	Ownership and control of household valuables by wife	15	2.50	28	46.67	35	8.33

| 6 | Do you have a bank account? | 9 | 7.50 | 33 | 55.00 | 34 | 56.67 |
| 7 | Have you ever obtained an institutional loan? | 9 | 7.50 | 33 | 55.00 | 34 | 67 |

Bank accounts and women's access to institutional credit facilities have been directly linked to women's economic empowerment (Malhotra et al. 2002 and Awan and Zertashia 2015). Therefore, both of these indicators were added to the economic empowerment index for women in our study. Only 7.5 percent women, in the untreated group, had personal bank accounts while 55 percent and 56.57 and respondents respectively in the literacy and skill groups had bank accounts. Surprisingly, the same percentage of women in all categories had availed institutional loans. To sum up the results of all seven questions/indicators, it appears that skilled women are more empowered economically followed by graduates of literacy programs.

Estimated Results from Regression Analysis

After providing the descriptive analysis of each question/indicator, estimated results from the regression analysis of women's economic empowerment model are provided in this section. Women's economic empowerment index (WEEI) is one of the major components of the overall women empowerment. Composed of seven indicators, the WEEI is given as model 3.3.2 in method and materials section. The regression results of the economic empowerment index are presented in table 4.2. The values of the coefficients are 0.172, 0.521 and 0.664 for control, literacy and skill groups respectively. All coefficients show high levels of statistical significance. The values of the coefficient of determination and F-Statistic are 0.59 and 172.

Table 3
Impact of Literacy and Skill Trainings on Women's Economic Empowerment Index (WEEI)
Dependent Variable: Women's Economic Empowerment Index (WEEI)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D1 Control Group	0.172619	0.016450	10.49369	0.0000
D2 Literacy Group	0.521429	0.023264	22.41399	0.0000
D3 Skill Group	0.664286	0.023264	28.55481	0.0000

Note: R-squared: 0.59 F-statistic: 172 Sample Size: 240

The estimated regression results denote that skill development and literacy levels exert significant positive impact on economic empowerment of women in the study area. Specifically, literacy and women empowerment are positively related with each other as the coefficient of literacy variable is 0.52 in comparison to the coefficient of women in control which is 0.17. This shows an empowerment gap of 35 points. This implies that literate women are 35 percent more empowered than uneducated women. Moreover, the results from economic empowerment index model show that women empowerment is also enhanced by skill development. The coefficient of skill variable is 0.66 in comparison to 0.17 for control group variable resulting in an empowerment gap of 0.49. This implies that skilled women are 49 percent more empowered than women who do not receive any program assistance.

Another major finding from the estimated result is that as the level of program assistance is increased, the empowerment of women also increases. This is found from the fact that women who have received both literacy as well skill trainings are found to be more empowered than the women who just received only literacy training. Empowerment coefficients for former and later groups are 0.660 and 0.52 respectively which shows an empowerment gap of more than 14 points implying that skilled women are 14 percent more empowered than mere literate women
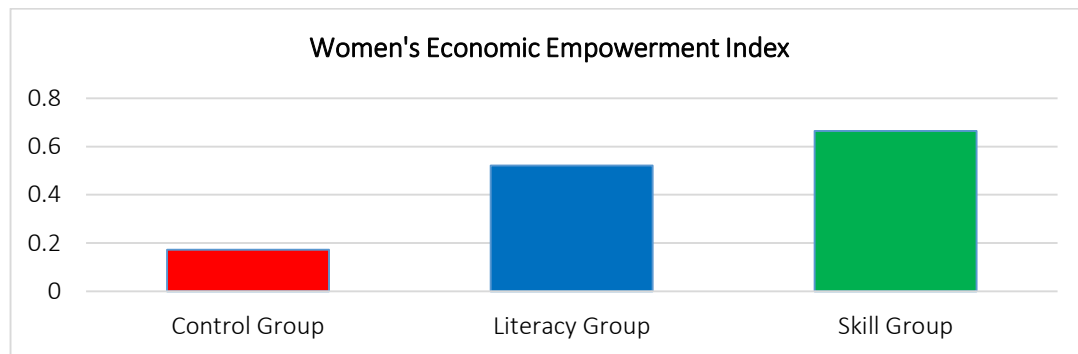
Figure 1 Impact of Literacy and Skill Trainings on Women's Economic Empowerment Index (WEEI)

The results in table 3 are also presented in pictorial form in figure 1. The index bars for the three groups are almost of the size of the respective bars in the mobility index. No group has been able to move from its previous standing on the Likert scale except for minor percentage point changes. The respondents in the control group are in the bottom category, while those in the literacy group stand second in terms of economic empowerment. As hypothesized the women in the skilled group are most empowered in economic terms.

Conclusion

The present study was carried out to analyze the impact of adult literacy and vocational skills trainings on women empowerment in district Naushahro Feroze of Sindh province of Pakistan. The foundations of the study were based on the literature gap on women empowerment with respect to Pakistan. In order to evaluate the impact of literacy and skill development on women empowerment, an economic empowerment index for women was constructed. The dependent variable (empowerment index) was regressed on three dummy independent variables. Each dummy variable in the present study represents one group of respondents in our study. To disaggregate the impact of literacy and skill development on women empowerment, three different types of respondents or groups/strata of respondents were sampled. A sample of 240 respondents was used in the current study. The total sample was divided into two groups – (I) control group and (II) treatment or intervention group.

Key findings from the descriptive analysis of economic dimension of women empowerment are that 100 percent women in the skill group are involved in paid work and are in favor of women doing paid jobs. No women in the control group are doing paid work and only 39 percent of them are in favor of doing any such activity. Another important indicator of economic empowerment is personal bank accounts. Relatively, more women in the skill group (around 57%) operate personal banks followed by literacy group women (55%). In the control group, 7.50 percent have bank accounts.

The major finding from the estimated empirical model for women's economic empowerment Index is that skill development and literacy enhancement affect women empowerment significantly. There are three key conclusions from the estimated results. Firstly, literacy and women empowerment are positively related with each other in our study area as the coefficient of literacy variable is 0.52 in comparison to the coefficient of women in control which is 0.17. This shows an empowerment gap of 35 points. Secondly, the results from cumulative empowerment index model show that women empowerment is also enhanced by skill development. The coefficient of skill variable is 0.66 in comparison to 0.17 for control group variable resulting in an empowerment gap of 0.49. This implies that skilled women are 49 percent more empowered than women who do not receive any program assistance.

The third important finding from the estimated result is that as the level of program assistance is increased, the empowerment of women also increases. This is found from the fact that women who have received both literacy as well skill trainings are found to be more empowered than the women who just received only literacy training. Empowerment coefficients for former and later groups are 0.660 and 0.52 respectively which shows an empowerment gap of more than 14 points implying that skilled women are 14 percent more empowered than mere literate women.

This implies that the women who benefited from both programs i.e. literacy as well skill training empowered in economic terms than the women who just received literacy trainings and the women who did not receive any type of training or program assistance. The second most empowered group of women is that of literacy graduates. Control group women are the least empowered in cumulative as well as sub-indices.

Recommendations

On the basis of findings of the study, several policy recommendations and suggestions can be developed for enhancement of women empowerment. The study findings suggest that more women friendly programs such as BBSYDP, NCHD literacy programs and microfinance facilities should be provided to women in the nook and corner of the country. Such programs should not be taken lightly or for granted. A three months' literacy training executed through functional literacy centers (FLCs) and one-month vocational skill program seem to change women for the better. Government should ensure through the State Bank of Pakistan that women should be given business loans on priority basis through microfinance and conventional commercial banks as women who got loans and bank accounts are found to be more empowered than other fellow women.

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