

# **Empowerment of Women: A Systematic Analysis**

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## **Abstract**

The empowerment of women is a contemporary issue regardless of the country in which a social planner tries to bring a sustainable development. Though women empowerment is not a sufficient condition it is still a necessary condition in order to stabilize and in turn to have sustainability of the development process. This paper by characterizing the women empowerment tries to obtain a scientific measure of empowerment. The measure obtained in this paper is argued to be scientific because the theoretical model is proved to be more realistic by building another empirical model to capture the self-perception of the women, for their empowerment. The result of the empirical models helps to deduce some of the most crucial factors to be considered by the social planner for any policy initiatives in this regard. Therefore this paper systematically and consistently characterizes the empowerment of women. The recommendations made by this paper carries a limitation that it is all based on a homogeneous sample i.e., PGT teachers in Chennai, Tamil Nadu.

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## 1. Introduction

Empowerment is the most frequently used term in development dialogue today. It is also the most nebulous and widely interpreted of concepts, which has simultaneously become a tool for analysis and also an umbrella concept to justify development intervention. For some, the empowerment of women is an active multi-dimensional process which enables women to realize their full identity and powers in all spheres of life. For others, empowerment represents the ability of women to handle responsibilities, to envision a better future and to work to overcome the obstacles that confront them. Empowerment can be measured by using selective indicators, such as active contribution in the household, the workplace and the community<sup>1</sup>.

Although the participation of women in the paid labour force and female enrolment in education has increased considerably over the last years, gender disparities<sup>2</sup> still exist in almost all the countries in the world. Urban working women all over India have proved that they can not only match but also excel men in various skills, if equal opportunities are available to them without any discrimination. The promotion of women empowerment as a development goal is based on a dual argument: (a) that social justice is an important aspect of human welfare and is intrinsically worth pursuing; and (b) that women empowerment is a means to other ends. A recent policy research report by the World Bank (2001), for example, identifies gender equality both as a development objective in itself, and as a means to promote growth, reduce poverty and promote better governance.

Despite empowerment of women and eliminating gender disparities being one of the Millennium Development Goals (MDGs)<sup>3</sup> [Human Development Report (HDR), 2003], yet to date, no major efforts have been made to develop a rigorous method for measuring and tracking changes in the levels of empowerment. The Gender Development Index (GDI) takes into account inequality in the achievements between women and men. The greater the gender disparity in human development, the lower is a country's GDI compared to its Human Development Index (HDI). Thus, the GDI is simply the HDI, which is adjusted downwards for gender inequality. The Gender Empowerment Measure (GEM) on the other hand, measures the extent to which a woman has influence in decision-making, in politics, in professional life, and in organizations. The GEM has been used widely in advocating the empowerment of women. The HDR takes into account some aspects of female empowerment (i.e., economic participation, political participation and power over the economic resources) and to an extent it explains the degree of their empowerment. But there are various other aspects also that decide the level of empowerment. Though a woman is literate and working, she may not be empowered in the following aspects: domestic decision-making, financial autonomy (i.e., control over the resources), mobility/freedom of movement, child related issues (e.g. well-being, schooling, health, marriage), and participation in the modern sector.

According to Scribner, *et al.* (2000), only by the empowerment of women that favour teachers, can the future generation emulate and learn from their mentors. So it has become a basic necessity to get the women teachers empowered economically, socially and politically. While Tamil Nadu is one of the better-off states in India in terms of per capita income, it also retains the highest rate of income inequality among the 14 major states<sup>4</sup>. This uneven improvement in the quality of life is particularly pronounced in rural areas and among women. Locally elected government bodies have not yet been empowered, fiscally or administratively, to deliver services to these affected people. This situation makes Tamil Nadu an excellent environment to investigate the problem and look at the empowerment of women, which was not done by the earlier study. The earlier literature have explained the issues through theoretical investigations but

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<sup>1</sup> Encyclopedia of Women Development and Family Welfare, p: 66.

<sup>2</sup> Women are employed in low-quality jobs; lower remuneration; easily replaced and are the first to lose their jobs; with a lack of access to vocational and technical education and training as well as employment, etc.

<sup>3</sup> The MDGs formed in 2000 by United Nations Development Program (UNDP) for the integration of the economy at the country level through assisting developing countries in preparing MDG reports that chart progress towards the goals, to build global support for the goals through supporting the Millennium Project and supporting advocacy and awareness-raising efforts based on national strategies and national needs.

<sup>4</sup> Source: <http://lnweb18.worldbank.org/ESSD/sdvext.nsf/68ByDocName/CurrentInitiativesTamilNadu> accessed on 20-8-2004.

lacked the empirical testing and thus enunciated the present study to probe into the empowerment issues empirically.

The present study fills this gap as it attempts to develop a structure, which would analyze the empowerment of women more scientifically. By constructing two models the study basically has two objectives in particular, firstly finding the determinants of women empowerment and secondly, construction of the empowerment index. In this way, the study clearly meets the necessary and sufficiency condition and is thus complete. The specific objectives of the present study are as follows: (a) To examine the various factors which affect the empowerment of women Post Graduate Trained (PGT) teachers in the city of Chennai, and (b) To derive policy implications based on the results obtained in this primary study.

The paper has been organized into seven sections with the literature review as the second section, followed by the model in section three. The empirical model is in section four and the data and variables are explained in the fifth section. The results have been explained in section six, and the paper concludes in section seven.

## **2. Literature Review**

Promoting gender equality and women empowerment is one of the key objectives of MDGs. The United Nations Development Program (UNDP) introduced GDI and GEM in 1995 as a supplement of HDI. These two indices account for gender inequality in the achievement of basic capabilities and in the economic opportunities and political areas.

This section deals with the review of literature of the work done related to the empowerment of women. The section is divided in two parts. The first part reviews all the articles relating to the empowerment of working women in general and the second part deals with the empowerment of women teachers along with the determinants affecting the empowerment process.

### *2.1 Studies on Empowerment of Working Women*

A number of studies have been carried out in India and elsewhere that have tried to look in to the empowerment of women. The study by Vianello *et al.* (1990) showed that a husband's power within marriage tended to increase in proportion to the resources that he could muster: education, income, prestige, social status, and so on. The author also found that the husband's power was associated with the stage in the life cycle and with the presence of children in the home. More importantly, wives who worked for pay had more power than wives not gainfully employed. When the resource theory was applied to the study of marital power in different societies, the findings were inconsistent. Research results about decision-making from the United States [Kendell and Lesser, 1972; Centers *et al.*, 1971], France [Michel, 1967], West Germany [Lamouse, 1969; Lupri, 1965; 1969], and other countries showed a positive association between the husband's power and his socio-economic resources, such as education, social status, income, and occupation. In the above studies there were curvilinear tendencies in the data and weak relationships that lacked statistical significance.

Burr (1973) developed a general model of marital power which spells out a set of proposition. It takes into account the complex interconnection between the amount of power, the cultural or normative context, and the specific tangible and intangible resources that affect the distribution of marital power. Peattie and Rein (1983) and Sapiro (1984) rightly mentioned that it is necessary for women to organize themselves as women, and to devise a strategy on how to win leading positions. Amarnath *et al.* (1996), have described the consequences of middle-class women taking up economically productive roles. The study examines whether the gender bias of men has undergone some change in the recent past. In order to carry out the analysis, the study uses six parameters – role perception, say in decision-making, acquisition of assets, economic freedom, spouse's co-operation, and perception of status change. A sample of 68 middle-class women employed in different sectors of Anantapur District (Andhra Pradesh) within the age group of 20 to 45 years was selected. The findings indicate that the employment of women has led to the women having a greater say in the decision-making process and thus, has lessened the degree of gender bias.

Kabeer (1999) has attempted to construct the indicators of the empowerment of women, by using three-dimensional conceptual framework: (a) the 'resources' as part of the pre-conditions of empowerment; (b) the 'agency' as an aspect of process; and lastly (c) the 'achievements' as a measure of outcomes. The study shows that the most probable indicators for empowerment of women are: family structure, marital advantage, financial autonomy, freedom of movement, and lifetime experience of employment participation in the modern sector. The study by Malhotra *et al.* (2002) identifies the methodological

approaches in measuring and analyzing the empowerment of women. The various indicators for measuring empowerment of women given in the study are: domestic decision-making; finance and resource allocation; social and domestic matters; child related issues; access to or control over resources; freedom of movement; and so on.

Stine and Karina (2003) explain the term 'empowerment' as a process by which the disempowered individuals and groups gain the power to control their lives and the ability to make strategic life choices. The researchers also emphasise that the economic elements of empowerment refer mainly to the capability of earning a living. The study finds that one of the important determinants of the low average income of women is their intermittent labour force participation, which is a consequence of their time spent on unpaid work such as childcare, housework and food production. Mahendra (2004) has studied the female work participation using occupational data from the National Family Health Survey (NFHS) data set, and compared the same with the 2001 Census and the National Sample Survey Organization (NSSO) data. The study finds that: (a) larger the family size the lesser is the chance for female work participation; (b) education has a positive relation with urban female work participation. The study by Kishore *et al.* (2004) shows the status of women's empowerment as a whole and in each of the Indian states in particular, with the help of NFHS-2<sup>5</sup> data sources. The sample of the study includes married women in the age group 15-49 from these states. The study divides the indicators of empowerment process into three sub-divisions: (a) the indicators of *evidence of empowerment* (through educational attainment); (b) the indicators of *access to potential sources for empowerment* which measures women's access to education and media exposure; and (c) the indicators of the *setting for empowerment*, which focuses on the circumstances of the women's lives and reflects the opportunities available to them. Tamil Nadu ranks eleventh in the level of empowerment among the 26 states, thereby indicating further scope for improvement.

It has been seen in the literature that a well-defined empowerment measure facilitates in finding out the present empowerment level. But these empowerment measures might work differently among different sections of women, due to the heterogeneity factor. So there is a need to devote a separate section to study the literature relating to the sample target (i.e., empowerment of women teachers) and find out the factors affecting their level of empowerment in particular.

## 2.2 Studies on the Empowerment of Women Teachers

The teachers' opportunities for professional promotion are inherently limited by the nature of the profession (Vianelo, *et al.*, (1990)). This is especially true for all women teachers. The study divided the perception of gender inequality on the job with the following factors: demographic variables; social background; perception of work conditions; and perception of the political performance with regard to gender equality. Mangal (1991) has tried to explain the nature and extent of role conflict among women teachers by using a random sample of 250 respondents from the city of Ghaziabad in Uttar Pradesh. The factors used to explain the conflict are: age; the education of the working women vis-à-vis other family members; the size of the family; et cetera. The study finds that six out of every ten women teachers have not risen up to the expectations of their husbands, thereby implying that they have experienced role conflict. This conflict has been low among the more educated, comparatively older women, having high family income, with less than ten years of service, and those that are in degree and post-graduate colleges. The study finds that due to this conflict the women teachers are faced with the problem of inadequate time to rest and subsequent fatigue. However, the social and interpersonal relationship is not affected much.

Pradhan (1992) has conducted a study on the secondary school teachers' attitude towards some aspects of the teaching-learning process, which includes the effects of gender on the school managements. In order to find this, the study surveys 150 secondary school teachers (75 male and 75 female) from the Koraput district (Orissa). The study finds that the male secondary school teachers have a more positive attitude than the female teachers towards the child-centred practices, the educational process, the pupils, and the teachers. Based on these findings, the author concludes that the female teachers are not empowered and as a consequence, they do not have a positive attitude towards the teaching-learning process.

Scribner *et al.* (2000) in their study have used the School Participant Empowerment Scale (SPES) to assess empowerment among the career and technical education teachers. The scale consists of 38 items, divided into six subscales: (a) decision making; (b) professional growth; (c) status; (d) self-efficacy; (e) autonomy; and (f) impact. Based on the analysis, the study finds that both women and men teachers are empowered. However, the nature of empowerment is different across the two groups, especially where the

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<sup>5</sup> NFHS-2 is the second round of survey which was conducted in the year 1998-99.

men have more autonomy power and the female teachers have more decision-making capacity. In other words, the study finds that men have more power but women are good decision makers. In another study, Stacki (2002) has argued that for the women teachers to be the true role models and to pass on the values of gender equity to girls and boys, they need to facilitate their own empowerment in both their private and public lives.

As we have seen, there are a number of drawbacks in the existing empowerment measures, and the present study tries to improve them<sup>6</sup>. However, the literature reviews suggest that when considering the women in general and with regard to women teachers in particular, the three most vital indicators of women empowerment are: (a) decision-making in the field of financial, child related and social issues; (b) access to or control over resources; and (c) freedom of movement. Besides these, there are a few indicators that have been rarely used, like time management, sense of self-worth. Both conceptually and practically, women teachers' empowerment is an important issue and has to be considered, because it paves the way for the empowerment of future generations.

### 3. Method

Since the purpose of this study is to explore the degree of empowerment by observing the existing conditions of women's problems, it is important to note that empowerment should include the standards that lie outside the localized gender systems [Sen and Grown, 1987]. A number of studies have shown that women may be empowered in one area of life but not in others [Mather, *et al.* 1997; Kishore, 2004]. However, it need not be presumed that if a development intervention promotes women's empowerment along a particular dimension then the empowerment in other areas would not necessarily follow. In terms of practical measurement, however, it is difficult to neatly separate the dimensions. For example, many aspects of economic or social empowerment overlap considerably with the familial dimension, as in the case of the control over domestic spending or savings, or the limitations on mobility or social activities. An attempt has been made in this regard by taking all these factors into consideration and formulating a model based on the same.

The present study employs qualitative analysis, which ensures the direction and magnitude of each factor's influence on the level of empowerment. In order to see the impact of different dimensions on empowerment the following hypotheses were tested.

The list of the ten hypotheses which have to be empirically tested is: higher the empowerment of women when staying in a nuclear family; higher the age of the women PGT teachers, higher the levels of empowerment among them; greater the qualification of the women PGT teachers, higher the level of empowerment; greater the mobility of the women PGT teachers, greater the level of empowerment; higher the support given by women PGT teachers to their natal home, greater their chance for empowerment; higher the control of the women PGT teachers over their personal salary, greater the chance of empowerment; higher the age difference of the PGT teachers with their spouses, lower their empowerment level; higher the educational difference of the PGT teachers with their spouses, lower their empowerment level; higher the number of children for the PGT teachers, lower their level of empowerment; more the time spent on household work, less the empowerment level for the PGT teachers.

The next section shows the methodology adopted to carry out the qualitative analysis by using the Logit Model as given by Kramer (1983). The quantitative analysis, which uses the Multiple Regression Analysis, has been explained later on.

### 4. Empirical Model

#### 4.1. Qualitative Analysis

The study looks into the determinants of empowerment by employing a Logit model, where the dependent variable (i.e., the empowerment of women PGT teachers) is obtained from the respondents' perception about whether they feel empowered or not. Thus in the present analysis if the respondent perceived that she is empowered then the value given is 1, and 0 if otherwise. By this manner the dependent variable was derived in the form of a quality variable, to proceed in the analysis. Thus data on Empowerment of Women PGT teachers in the city of Chennai is now the Qualitative Nature, i.e., it is binary (0 and 1) value. The study then captures the impact of several factors on the empowerment of women school teachers.

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<sup>6</sup> See Appendix I for a review of various indicators used in earlier studies.

The Logit method is based on the logistical curve, for all values of the regressors, the value of the dependent variable (the probability of positive response) falls between 0 and 1. The probability function is a non-linear function following a logistical curve. This is a more realistic pattern of change in the probability compared to other Qualitative Dependent Variable Models like the Probit, for two reasons. First, the odds ratio – which is a measure of the strength and direction of relationship between the two variables. This ratio has a special property of not requiring variables to be normally distributed. Second, a mathematical transformation of the odds ratio is the logit model. This mathematical transformation removes the problem of asymmetry existing in the odds ratio and in turn makes this a superior method). In this study, the probability of women PGT teachers to be empowered ( $P_i$ ) can be given as:

$$P_i = P_r (Y_i=1) = E (Y_i/X_i) = 1 / (1 + e^{-(\beta_1 + \beta_2 X_i)})$$

Where, if  $Y_i = 1$ , women teachers are empowered and if  $Y_i = 0$ , then the women teachers are not empowered,  $E (Y_i / X_i)$  is the expectation that a woman teacher is empowered given the values of exogenous variables ( $X_i$ ), where betas are the parameters to be estimated.

Similarly, the probability that the women PGT teachers are not empowered ( $1-P_i$ ) can be given as,

To estimate the above model, take natural logarithm on both sides,

$$L_i = \log (P_i / 1-P_i) = \beta_1 + \beta_2 X_i + u_i$$

Where,  $u_i$  follows the normal distribution with zero mean and variance equal to  $1/[N_i P_i (1-P_i)]$ . The exogenous variables are in  $X_i$  and  $N_i$  denotes the number of respondents.

$L_i$  is the Logit Function<sup>7</sup> used in this study in order to get the determinants of empowerment of women teachers (Chennai). The above model is estimated by *Maximum Likelihood Estimation*. The dummy used in the analysis is as follows:

$$\begin{aligned} \text{Woman PGT Teacher Empowered} &= 1 \text{ if respondent is empowered} \\ &= 0 \text{ if otherwise} \end{aligned}$$

The qualitative analysis is carried out using the statistical package STATA 8.0., but before explaining the data and the variables, the quantitative analysis has been empirically explained in the coming section.

#### 4.2. Quantitative Analysis

To measure the degree of empowerment the study used Weighted Average Method in order to calculate the empowerment index by using the various proxy variables. The proxy variables, which have been given equal weight in calculating the empowerment index, are: (a) control over personal salary; (b) maintenance of family income; (c) supporting the natal home; (d) financial decision on own health care; and (e) expenditure on the education of children. These proxies have been framed in the form of scales, based on the financial decision-making power which is as follows: 0 = if the respondent is not consulted, 1 = if she is consulted, 2 = if everyone decides together, 3 = if the respondent consults others and decides herself, and 4 = if she decides herself.

Therefore, the formula that is adopted in the study for measuring empowerment of women PGT teachers is given as:

$$E_i = \{(W_{1j} * 20 \text{ per cent}) + (W_{2j} * 20 \text{ per cent}) + (W_{3j} * 20 \text{ per cent}) + (W_{4j} * 20 \text{ per cent}) + (W_{5j} * 20 \text{ per cent})\}$$

Where,

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<sup>7</sup> Refer Wooldridge (2000) for the detailed version of the Logit Function.

- $W_1$  = Control over personal salary
- $W_2$  = Maintenance of family income
- $W_3$  = Helping/supporting the natal home
- $W_4$  = Financial decision on own health care
- $W_5$  = Expenditure on education of children

And  $j$  stands for the number of respondents in the sample.

The reason for considering  $W_1$  to  $W_5$  as more important is that these variables are prime factors, in deciding the financial empowerment of women. The index is framed by reviewing many of the earlier literatures<sup>8</sup>. This method of giving equal weightage to these variables has been derived from the way the GEM is calculated by UNDP's Human Development Report (1995)<sup>9</sup>. There are large numbers of alternative variables and alternate ways that can be used in measuring women's empowerment, but in this study only a subject has been taken which is assumed to best capture the present analysis.

Then by using a multiple regression analysis the direction and magnitude of each factor's influence on the empowerment of women PGT teachers is determined.

The model is explained as:

- $E_j$  = Empowerment Index of the women PGT teachers,
- $X_j$  = Contains all the explanatory variables (explained in the previous section),
- $\beta_0, \beta_1, \dots, \beta_n$  are the parameters to be estimated,
- $\varepsilon_j$  = Random unobserved disturbance term, with the mean as zero and the variance as constant.

Keeping the  $j$  term for the respondent's number in the sample and  $i$  for the various exogenous variables.

Based on this method the quantitative analysis has been carried out by using the statistical package STATA 8.0. The results and their discussion are subsequently presented after explaining the data sources and the variables.

## 5. Data and Variables

The present study has taken into consideration a section of teachers, i.e. the PGT teachers. In order to obtain information, a representative sample of 80 women PGT teachers from the total population in the city of Chennai were chosen for detailed analysis to find out their empowerment status. This study was conducted in schools, which employed PGT teachers and are earning a salary in accordance with the government pay scale affiliated to the Sixth Pay Commission that came into effect from 1<sup>st</sup> January 1996<sup>10</sup>.

Since the focus of the study is to find the empowerment of the PGT teachers at home and at the workplace, the survey included only married PGT teachers with the assumption that they face more problems. The data for the study has been collected during July–September 2004. The sampling technique used is the stratified random sampling. In order to obtain a proper representation of the unit under study, the city of Chennai has been divided into four regions – the North, South, Central, and East zones. These regions are based on the divisions made by the Chief Education Office, Chennai. A sample of 20 teachers has been collected from each zone. The total schools that have been sampled are 12 and each zone consists of 3 schools.

The dependent variable is the empowerment dummy, which has been explained in the previous section. The various explanatory variables that affect the level of empowerment of women PGT teachers and their proposed relationships are explained as follows:

### 5.1. Family Type

<sup>8</sup> See Appendix I for the important indicators of empowerment.

<sup>9</sup> See Appendix II for the calculation of GEM.

<sup>10</sup> The information regarding the total number of schools and teachers in the city of Chennai has been obtained from the Chief Education Office (CEO), Saidapet, Chennai.

In joint/extended families there is a greater possibility of decisions to be taken by the older people in the family. Besides, the income is usually being shared among many individuals along with a lot of restrictions in the day-to-day affairs. But on the other hand, a joint family eases the work pressure on the woman, so she can devote time for enhancing her skills, leading to more empowerment. This is not prevalent in nuclear families. On the whole, if a family is nuclear then the chances for a woman to be empowered are higher than in a joint family.

### 5.2. Age

There might be higher levels of empowerment amongst the women in the higher age group. This is so because a younger woman might be bound to listen to the elders in the family and so there might be a lesser chance of empowerment for her. But when a woman is older, it is possible that the elders in the family have already passed away, and hence, she is responsible for taking decisions. Even at the workplace, if a teacher is a senior then due to her seniority she may have more decision-making powers. Thus, there tends to be a positive relationship between the age of the women teachers and the level of empowerment.

### 5.3. Educational Qualification

It is expected that with a higher level of educational qualification, an individual will have more chances of obtaining wider knowledge and awareness, and will thus have higher levels of confidence in all walks of life. Hence, the person's empowerment level will tend to increase. The dummy variables have been introduced for education level, keeping the base as the minimum qualification (i.e., Post Graduate and B.Ed), which are required by the state government to qualify as PGT teachers.

Education Dummy = 1 if completed M.Ed and M.Phil  
= 0 if otherwise

As expected by hypothesis 3, higher the level of education, higher will be the empowerment level.

### 5.4. Household Time Spent

Higher the time spent doing the household work, lesser is the time that is available for women to take rest. Thus the burden of the household work reduces the time at the disposal of women to use according to her choice, hence there tends to be a negative relationship between the hours of work at home and the empowerment level.

### 5.5. Freedom of Mobility

The earlier research findings show that in many cases the freedom of movement of the working women is also restricted (See for example, Kishore, *et al.* (2004)). The women are not allowed to go elsewhere alone and any delay from the place of work is often considered a violation of the norm. Under these circumstances, women are not empowered even if employed. Hence the variable takes into account the mobility of the women to judge whether they are empowered or not.

### 5.6. Spouse Age Difference

The impact of the age difference on the empowerment level of the women PGT teachers is seen in the analysis. The paper of Kishore, *et al.* (2004) has used this indicator.

### 5.7. Educational Difference with Spouse

There is a positive relation between the educational level and empowerment level of the women PGT teachers and in the same way there is a positive relationship found with respect to the educational level of the spouses of these women PGT teachers.

### 5.8. Number of Children

When the women PGT teachers have a larger number of children then they face higher levels of responsibilities with respect to their health issues, education, and other child related issues. Since more time is devoted to these issues, lesser time is allotted for other things. Thus there is a negative relationship between the number of children and the empowerment level of the women PGT teachers.

### 5.9. Control Over Personal Salary

Proxies for the control over the personal salaries are framed in the form of scales, based on the decision-making power of the women PGT teachers. The scaling system has been explained in the section 4.2. It clearly shows that if a respondent has more value for the variable then she has more control over the personal salary, thus having a positive relationship with the level of empowerment.

### 5.10. Supporting the Natal Home

The proxies have been used for the decision-making power on supporting the natal home. The five scalings which capture this is given in section 4.2. As the decision for helping the natal home (i.e., helping the parents of the women PGT teachers after their marriage) is undertaken by themselves, the chances for the women PGT teachers to be empowered is higher.

Before looking at the methodological study, this paper tries to look at the simple description of the information obtained from the 80 PGT teachers using the descriptive statistics. Table 1 gives the mean statistics of the different variables.

From the descriptive statistics it can be seen that only 23 per cent of the teachers have a nuclear family<sup>11</sup>. The age of the PGT teachers varies from 35 to 60, with an average age of 46 years. It is seen from the table that 69 per cent of the women PGT teachers are highly qualified (i.e., M.Phil/Ph.D). The daily expected time spent on household work by the women PGT teachers is approximately 6 hours. It is important to note that nearly 52 per cent of the teachers have said that they have freedom of mobility. The sixth and very trivial observation is that the difference in the age of the spouses is approximately 5 years and the average educational difference with the spouse is approximately 1, which means there is no major educational difference between the women PGT teachers and their husbands on an average. It is seen that the women PGT teachers, on an average, have 2 children. The last two variables show that on an average the women PGT teachers decide together with their family members about personal salary and supporting the natal home. The next section gives the results.

**Table 1: Descriptive Statistics of Women Empowerment Variables (N=80)**

Variables	Mean	Std. Dev.	Min	Max
1. Family Type	0.23	0.42	0.00	1.00
2. Age	46.38	6.93	35.00	60.00
3. Education Dummy	0.69	0.47	0.00	1.00
4. Time Spent on Household Work	0.64	0.48	0.00	1.00
5. Freedom of Mobility	5.24	2.76	0.00	10.00
6. Spouse Age Difference	0.71	0.46	0.00	1.00
7. Educational Difference with Spouse	6.12	2.01	2.00	10.00
8. Number of Children	1.51	0.71	0.00	3.00
9. Control over Personal Salary	1.54	1.12	0.00	4.00
10. Supporting Natal Home	1.65	1.16	0.00	4.00

Source: Primary Survey

## 6. Results and Discussion

The study explores the determinants of empowerment by using the Logit model for explaining the qualitative analysis. Later on, for the same determinants the regression analysis is used on the empowerment index. The advantage of the regression technique is in finding the relation between empowerment of PGT teachers and an explanatory factor holding all the other variables constant. Thus the study explores the same determinants of empowerment by using the Logit model for explaining the qualitative analysis and the regression technique is used for analyzing the quantitative analysis. The argument arises while choosing the weight of the attributes that are considered for constructing the women empowerment index. Based on earlier literature this paper tries to give different weightage to these attributes but interestingly an equal weightage is given to the construction of empowerment index which reflects the qualitative perception of women about their empowerment among this particular sample better. And we have observed the same in the results given in Table 2.

<sup>11</sup> Nuclear Family is a family where there is only the husband, wife and their children.

**Table 2: Women Empowerment Estimate for PGT teachers (N=80)**

Variable	Empowerment Attributes of Qualitative Model Coefficient <sup>a</sup> (1) <sup>b</sup>	Empowerment Attributes of Quantitative Model Coefficient <sup>a</sup> (2) <sup>c</sup>
Family Type	1.01 (0.91)	0.01 (0.09)
Age	-0.14** (-2.36)	-0.01* (-1.43)
Education Dummy	0.30 (0.32)	0.12* (1.26)
Freedom of Mobility	0.38 (0.45)	0.06 (0.55)
Age difference with Spouse	0.15* (1.05)	-0.02* (-1.32)
Education difference with Spouse	2.48*** (3.01)	0.05 (0.58)
Time Spend on Household Work	-0.21* (-1.11)	-0.04* (-1.87)
Number of Children	-0.47 (-0.69)	-0.05 (-0.84)
Control over Personal Salary	1.94*** (3.08)	0.35*** (8.01)
Supporting Natal Home	1.02** (2.28)	0.22*** (5.69)
Constant	1.90 (0.57)	1.55*** (3.96)
R2	0.53	0.75
Chi- Square	58.79*** (0.00)	-
F- value	-	24.12*** (0.00)

*Note:* <sup>a</sup> Figures in parenthesis is the probability value and \*\*\*, \*\*, \* are significance levels at 1%, 5% and 10% respectively.

<sup>b</sup> This column represents the result of the logit model using the dependent variable as a qualitative one.

<sup>c</sup> Here the Empowerment Index is considered as the dependent variable using the regression analysis.

When the age of the women PGT teachers is higher, it tends to have a negative effect on the level of empowerment. This seemed to be an interesting result and has been added into the analysis, even though it is not as expected in the hypothesis. It may be because they are bound by too many customs and traditions and have thus accepted and come to terms with a biased society when compared to the younger ones. It was found that as the age of the respondents increased by one unit the level of empowerment decreased by -0.14 level (in the qualitative analysis) and -0.01 level (in quantitative analysis). At a higher educational level<sup>12</sup> it was found that the women teachers had more empowerment. It is seen that when the respondent completes her M.Ed and M.Phil or Ph.D the influence on the empowerment level is greater at 0.12 level of coefficient (in the quantitative analysis). In contrast the self-perception of women does not reflect this result and the obvious argument is that the realization of higher education with respect to empowerment is not too much due to several other conditions. It is also clear from the data that as the level of education increases the level of conflict faced by them comes down. Thus supporting the hypothesis of higher the education higher is the level of empowerment.

When checking for the difference between the ages of the woman PGT teachers with respect to their spouse's age, an interesting phenomenon was observed. If this difference is around 5 years then it supports their empowerment level positively, i.e. at 0.15 level (in the qualitative analysis). But when analyzing the regression results, the age difference is negatively related to the women's empowerment at 0.02. So it can be implicated that if there is an age difference of 5 years then the women can attain empowerment but if it moves away from this then it can lead to the opposite.

It is also shown that as the husbands of the women PGT teachers are equally educated, the level of empowerment is greater and there is a better chance of there being a good understanding between them.

<sup>12</sup> See section 5.3 for the explanation of Education Dummy Variables.

Thus it leads to a higher level of empowerment of women. The results in the qualitative analysis show that as the educational level is similar among the women PGT teachers and their spouses, the level of empowerment is higher by 2.48 levels. Thus it can be said that women must be equally educated as their husbands. It was found that an increase in the hours of work at home tends to have an insignificant relation with empowerment. This is an interesting result, which was found in the analysis, i.e., for increase in each hour of household work there is a fall in the empowerment of women at 0.21 (for qualitative analysis) and 0.04 (for quantitative analysis).

If a woman teacher has a control over her personal salary then the decision-making power of the women PGT teachers increases. For each unit rise in the control of the personal salary the empowerment level rises by 1.94 level (in qualitative analysis) and by 0.35 level (in quantitative analysis). This shows that the women should have more control over their personal salary to catch up on the empowerment path. The women PGT teachers can be empowered if they can help or support their natal family. So it is found that when a woman PGT teacher supports her natal family, she is empowered at 1.02 levels (qualitative analysis) and 0.22 levels (quantitative analysis). This shows that a woman should have an independent decision-making capability for becoming more empowered. The three variables: family type (joint or nuclear); freedom of mobility and the number of children seem to be insignificant in our analysis and so it does not show any relation with the empowerment level of the PGT teachers.

The result depicts that the value of R-square in the qualitative analysis as 53 per cent, i.e., 53 per cent of the variations in the empowerment level which has been explained through these explanatory variables. But while considering the R-square of the quantitative analysis, almost three-fourths of the variations are explained by the same set of variables. The Chi-square (explains the robustness of the model) and the F-value is highly significant, which implies that the systematic variation is considerably larger which is explained in the model. Thus, the study by and large reveals that the women PGT teachers are capturing some of the important factors in deciding their empowerment level.

## **7. Concluding Remarks**

To conclude, the construction of the Empowerment Index made by this paper gives a crucial result. That is: whenever the standard of living of women is higher they give equal weightage for all the characteristic features or attributes considered as women empowerment. This is clearly demonstrated by comparing the model in which the women's self-perception of empowerment is taken as a dependent variable with respect to the quantitative model having Empowerment Index as the dependent variable. Hence this paper establishes that the Empowerment Index constructed reflect the reality (i.e., the self-perception of women regarding empowerment). Secondly, the study strongly recommends some of the most important factors to be considered by the decision makers while introducing any policy initiative for empowering women by constructing two different reasonable models which reflects the same. Hence, the level of economic equality and independence are the real indicators for measuring the status of women in any society. In a complex and stratified society like ours the status of women naturally differs from time to time, region to region, class to class, caste to caste, religion to religion, and from occupation to occupation. Also by analyzing both the quantitative and qualitative methods the study is able to compare the perception of empowerment felt by the respondents individually and the Empowerment Index of women framed from earlier literature.

The present study is faced with some limitations. It considers only PGT teachers who get the salary on the basis of the government pay scale. Hence, to that extent, other teachers have not been included in this study. This has however been done in order to remove the heterogeneity factor of varying degrees of job security that prevails among PGT teachers. The study can also be extended to other groups of women (both working and non-working groups) to get a clear picture of the economy. Due to the time factor the sample size has been kept small and limited only to the city of Chennai, so the results are area specific and thus can be expanded further. It has been extremely difficult to cull out information from the PGT women teachers regarding sensitive issues (their personal share of financial contribution to the family, husband's income and educational level in comparison with the respondent, etc.). So the study basically depends on the self-perception of working women regarding their multiple role performance, which can be removed with a more indirect approach of questioning and more sophisticated analytical tools.

Finally, there should be proper and appropriate intervention strategies (at home and at the workplace) that can prove to be a big source of assistance to empower women. It is not enough that women should be made economically independent, but they must also change their self-perception as our study shows to

certain degree. They need not always be at the receiving end. The society as a whole has to understand women's capabilities and their contribution to the developmental process. Empowering women is an important end in itself, not only as a human rights issue but also as having the potential to enhance human well being. Empowering women and improving their status are essential ingredients for realizing the full potential of the economic and political development of the entire society thus ensuring sustainable development.

## References

1. Agarwal, B, (1994) *A Field of One's Own: Gender and Land Rights in South Asia*, Cambridge: Cambridge University Press.
2. Burr, W. R., (1973). *Theory Construction and the Sociology of the Family*. Wiley Pub.
3. Centers, R., Raven, B. H. and Rodriguez, A., (1971), "Conjugal power structure: a Re-examination", *American Sociological Review*, No. 36.
4. Amarnath R. and Ch., Umamohan, (1996), "Gender and Work", *Contemporary Indian Women Collected Works*, Vol. 6, New Academic Publications, Delhi.
5. *Encyclopedia of Women Development and Family Welfare*, ed. Laxmidevi, Pub: New Delhi, Vol. 6, p. 66.
6. Kabeer, N., (1999) "The Conditions and Consequences of Choice: Reflections on the Measurement of Women's Empowerment", UNRISD Discussion Paper No. 108, August.
7. Kendell, D. B. and Lesser, G. S., (1972), "Marital Decision-Making in American and Danish Families: A Research Note", *Journal of Marriage and the Family*, No. 34.
8. Kishore, Sunita and Gupta, Kamala, (Feb. 2004) "Women's Empowerment in India and Its States: Evidence from the NFHS", *Economic & Political Weekly*.
9. Kramer. J. S., (1983), *The Logit Model for Economists*, Edward Arnold Publishers, Cambridge University Press, New York.
10. Lamouse, A., (1969), "Family Roles of Women: A Germany Example", *Journal of Marriage and the Family*, No. 31.
11. Lupri, E., (1965) "Industrialization and Structural Performance in the Family: An Intercultural Comparison", *European Journal of Sociology*, No. 5.
12. Lupri, E., (1969) "Contemporary Authority Patterns in the West German Family: Study in Cross-National Validation", *Journal of Marriage and the Family*, No. 31.
13. Mangal, Santhosh (1991), "Role Conflict among Working Women in Teaching Profession", Council for Social Development, New Delhi.
14. Mahendra., S. D., (2004) "Female Work Participation Using Occupational Data From NFHS Data Set", *Economic & Political Weekly*, February 14.
15. Mather, Mark and Malhotra, Anju, (1997), "Do schooling and work empower women in developing countries? Gender and domestic decisions in Sri Lanka." *Sociological Forum* 12(4): 599-630.
16. Malhotra Anju, Schuler, S. R., and Boender. C., (2002), "Measuring Women's Empowerment as a Variable in International Development", Background Paper Prepared for the World Bank Workshop on Poverty and Gender: New Perspectives.
17. Michel, A., (1967), "Comparative data concerning the interaction in French and American families", *Journal of Marriage and the Family*, No. 29.
18. Peattie, L. and Rein, M., (1983), *Women's Claims: A Study in Political Economy*. Oxford University Press: London.
19. Pradhan, N., (1992), "A Study of Secondary School Teachers' Attitude Towards Some Selected Aspects of Teaching-Learning Process: The Effect of Sex and Management of School", Teacher Education, New Delhi.
20. Stacki, Sandra, (2002), "Women Teachers Empowered in India: Teacher Training Through A Gender Lens", UNICEF Publication, New York.
21. Sapiro, V., (1984), *The Political Integration of Women*. University of Illinois Press.
22. Scribner, J. P., Allen, D. T, and Hager, R. D., (2000), "An Exploratory Study of Career and Technical Education Teacher Empowerment: Implications for School Leaders", University of Missouri-Columbia.
23. Sen, Gita and Grown, Caren, (1987), *Development, Crises, and Alternative Visions: Third World Women's Perspectives*. New York: Monthly Review Press.
24. Ankerbo, Stine and Hoyda, Karina, (2003), "Education as a Means to Women's Empowerment", Opgave, Approaches to Development (U-landslære), Aarhus University.
25. United Nations Development Program, *Human Development Report 2003*. New York: Oxford University Press, 1995.
26. Vianello, Mino and Siemienska Renata, (1990), *Gender Inequality: A Comparative Study of Discrimination and Participation*. New Delhi: SAGE Publications.
27. Wooldridge, M. Jeffrey, (2000), *Introductory Econometrics: A Modern Approach*. United States of America: South Western College Publishing.
28. World Bank, (2001), "Engendering Development: Through Gender Equality in Rights, Resources, and Voice", *World Bank Policy Research Report*. Oxford: Oxford University Press.

## Appendix I: Indicators of empowerment used in earlier studies.

Empowerment Indicators	Authors
<i>Most Frequently Used Indicators</i>	
1) Domestic Decision-Making	Amarnath <i>et al.</i> (1996), Kabeer (1999), Malhotra <i>et al.</i> (2002)
a. Finances, resource allocation, spending, expenditures	
b. Social and domestic matters (e.g. cooking)	
c. Child related issues (e.g. well- being, schooling, health)	
2) Access to or control over resources	Amarnath <i>et al.</i> (1996), Kabeer (1999), Malhotra <i>et al.</i> (2002)
a. Access to, control of cash, household income, assets, unearned income,	
b. Welfare receipts, household budget, participation in paid employment	
3) Mobility/freedom of movement	Kabeer (1999), Malhotra <i>et al.</i> (2002)
<i>Less Frequently Used Indicators</i>	
4) Economic contribution to household	Amarnath <i>et al.</i> (1996), Kabeer (1999)
5) Time use/division of domestic labour	
6) Freedom from violence	Kabeer (1999)
7) Management/knowledge	Kabeer (1999)
a. Managerial control of loan	
8) Political participation (e.g. public protests, political campaigning)	Kabeer (1999), Malhotra <i>et al.</i> (2002)
9) Marriage/kin/social support	Malhotra <i>et al.</i> (2002)
a. Social status of family of origin	
b. Control over choosing a spouse	
10) Sense of self-worth	Amarnath <i>et al.</i> (1996)

## Appendix II: Calculation of Gender Empowerment Index (GEM)<sup>13\*</sup>

GEM measures gender inequalities in three basic dimensions of empowerment:

- i. Economic participation and decision making,
- ii. Political participation and decision making, and
- iii. Power over economic resources.

First, for each of these dimensions, an equally distributed equivalent percentage (EDEP) is calculated, as a population-weighted average, according to the following general formula:

$$\text{EDEP} = \frac{\{[\text{female population share (female index-1)}] + [\text{male population share (male index-1)}]\}}{2}$$

For political and economic participation and decision-making, the EDEP is then indexed by dividing it by 50. The rationale for this indexation is that in an ideal society, with equal empowerment of sexes, the GEM variables would equal 50% – that is, women’s share would equal men’s share for each variable.

Finally, the GEM is calculated as a simple average of three indexed EDEPs.

$$\text{GEM} = \frac{\text{EDEP}_p + \text{EDEP}_e + \text{EDEP}_i}{3}$$

$\text{EDEP}_p$  = Indexed EDEP for parliamentary representation

$\text{EDEP}_e$  = Indexed EDEP for economic participation

$\text{EDEP}_i$  = Indexed EDEP for income

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<sup>13</sup> United Nations Development Program. *Human Development Report 2003*. New York: Oxford UP, 1995.

## Questionnaire

### General Information:

1. Name:
2. Age:
3. Educational Qualification:  
1 - U.G.                      3 - B.Ed                      5 - M.Phil / Ph.D  
2 - P.G.                      4 - M.Ed
4. Additional Qualification:  
1- Diploma in Management    4- Computers  
2- Hindi Diploma                5- Others, specify  
3- Typewriting                    6- No
5. Institute Name & Address:
6. Marital Status: Single / Married / Widow / Divorcee  
- If married, when did you start working? Was it before marriage? Yes / No
7. First married at what age:
8. Income of Spouse: Lesser than / Equal to / Higher than wife.
9. Age of your husband compared to yours:  
1) Younger than                    4) 3-6 yrs Older  
2) Same age                        5) 6-9 yrs Older  
3) 1-3 yrs Older                    6) More older than that
10. Family Size:
11. Family Type: Joint Family / Nuclear Family
12. (i) Are you forced to work - Yes / No, if Yes, go to 14.  
(Or)  
(ii) Do you choose to work? Yes / No, if Yes, go to 13.
13. Reasons for work?
  1. To have a higher economic status.
  2. For a sense of security.
  3. To serve the people / community.
  4. To have financial independence.
  5. To utilize my education.
  6. To have my own status & position.
  7. To escape from domestic chores.
  8. Any other, specify.
14. Distance from house to work spot?
  1. Less than 5 km                    3. 15 km-25 km
  2. 5 km-15 km                      4. More than 25 km
15. Mode of Transport:  
Public: bus / train / share auto  
Private: 2-wheeler / car / dropped by spouse / by walk

### (1) Role Perception:

*At Work:*

- 1.1. Income Level per Month: Rs. ....
  1. Less than 8,000                    3. 13,000 to 17,000
  2. 8,000 to 13,000                    4. 17,000 & More
- 1.2. Are you a tax payer? Yes / No, If No, go to 1.7.





Family Budget  
Decision on wn health care  
Children’s education  
Children’s marriage

Codes:

- |                                 |                       |
|---------------------------------|-----------------------|
| 1. I decide                     | 4. I am consulted     |
| 2. I consult and decide         | 5. I am not consulted |
| 3. We discuss & decide together |                       |

**(5) Spouse’s Co-operation:**

- 5.1. Education of spouse: Lesser than / Equal to / Higher than wife.
- 5.2. Husband shares household work: Yes / No
- 5.3. Percentage of work shared by spouse: .....%
- 5.4. Husband fails to understand working women’s problems: Yes / No

**(6) Perception Of Status Change:**

- 6.1. Satisfaction with my present performance of multiple roles at home and at work:
  - 1. Very satisfied
  - 2. Somewhat satisfied
  - 3. Dissatisfied
- 6.2. How much can you spend without anyone questioning you? Rs. ....
- 6.3. Percentage of economic freedom enjoyed by you .....%
- 6.4. Are you free to wear what you want? : Yes / No  
- If No, Is there any specific dress code, please specify.....
- 6.5. Are you physically abused / sexually abused / mentally abused by spouse or anyone in the family? – Yes / No - If Yes, can you explain.....
- 6.6. Do you have freedom to go out where you want? : Yes / No  
- If No, any specific time or area mentioned for mobility?

**(7) At Workplace:**

- 7.1. Do you have autonomy at your workplace? : Yes / No
- 7.2. Do you have the decision-making power? : Yes / No
- 7.3. Is there room for professional growth? : Yes / No
- 7.4. Whether work has made a positive impact on your life? Yes / No  
- Reasons for it:
- 7.5. Whether you believe that it could increase your level of economic activity?  
- To a great extent / Some extent / Not at all.

**(8) At Community Level:**

- 8.1. Your involvement in the state-organized political participation:  
- To a Great Extent / Some Extent / Not at all.
- 8.2. Are you a member of any Organization?: Yes / No  
- If Yes,

<u>Academic Organization</u>	<u>Non-Academic Organization</u>
(Specify name)	

- 1.....
- 2.....

**(9) Do you feel you are empowered?** (Please write only your opinion in the space provided)

.....