Construction and Validation of Composite Women's Empowerment Index (CWEI)

Syeda Shahida Batool* Syeda Azra Batool**

Abstract

The objective of the research was to construct a multidimensional (viz., economic, familial, socio-cultural, and psychological) index of women's empowerment that comprised two independent studies. In Study 1, individual measures of women's empowerment were constructed separately, and factorial validity of the measures were established via exploratory factor analysis on a sample of 202 women of age ranged between 21- 60 year (Mean= 39.5, *SD*= 10.70), belonging to five major cities of Pakistan. In Study 2, the Composite Women's Empowerment Index was validated. Data of 500 women of age ranged between 21 and 60 year (Mean= 38.50, *SD*= 9.40) from five major cities of Pakistan on all dimensions of women's empowerment were individually subjected to exploratory factor analyses by using Varimax Rotation method. Factor analyses were yielded by Principal Component Analysis (PCA). Women's empowerment index as a latent variable appeared as a good model fitthrough confirmatory factor analyses. The scale showed reasonably high internal consistency.The results indicated that economic, familial, social and, psychological empowerment were interrelated and complement each other. Irrespective of the limitations, the study has immense scope.

Keywords: women's empowerment index, economic empowerment, familial empowerment, social empowerment, psychological empowerment.

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* Syeda Shahida Batool, Associate Professor, Government College University, Lahore
shahidaphd@yahoo.com
**Syeda Azra Batool, Assistant Professor Bahauddin Zakariya University, Multan
azrabatool@bzu.edu.pk

Introduction

Women's empowerment needs to be addressed in order to develop an economy (Duflo, 2012), and it is imperative to empower women in various fields (e.g., psychological, economic, familial, and social).According to Saraswathy, Panicker, and Sum,"women's empowerment is the outcome of the process of "Women identifying their inner strength, opportunities for growth, and their role in reshaping their own destiny" (2008: 190).Malhotra Schuler and Boender (2002) recommended greater interdisciplinary commitment as essential to improve the indicators and techniques that might hold the substantial features of women's empowerment, have logical worth, and acceptability among important shareholders. Unfortunately, there is no valid, reliable and standard tool available to assess women's empowerment. The reasons of paucity in the empirical enquiry (i.e., measurement) of women's empowerment might be twofold: one is the issue associated with the definition of women's empowerment.

A large body of researches in the field has used either an over-extended definition of women's empowerment or a truncated facet of it (Swain &Wallentin, 2008); the second one that makes the measurement of women's empowerment problematic is that it is not observed directly as it has manifold facets (e.g., economic, familial, socio-cultural and psychological). This might be the reason that researchers in different times used different dimensions of women's empowerment

separately or constructed empowerment indices to measure women's empowerment.

An important dimension of women's empowerment (psychological empowerment) though recommended by many scientists (Oladipo, 2009; Zimmerman, 2000) has ever been overlooked while constructing the index of women's empowerment. Whereas economic, familial and socio-cultural dimensions have been either used separately or by constructing indices by different researchers (e.g., Khan & Maan, 2008; Parveen&Leonhauser, 2005; Sridevi, 2005).

Literature Review

Given that the phenomenon of women's empowerment is contextual in nature, there is no universal standard to measure it. If we go back in the era when empirical work on women's empowerment, status and autonomy got popularity in different disciplines; education and employment were perceived as the proxy variables to stand for the empowerment of women in developing countries (Mason, 1986).Joshi(1999) affirmed that although education and employment were generally used to capture empowerment and other associated notions like women's status and autonomy, yet such proxy measures despite being significant and preferably related with empowerment might not carry all facets of the multidimensionality of the notion of empowerment.

Mason and Smith (2003) criticized the proxy variables such as education of women and their employment status along with other such variables like their own age at first marriage, age difference from the spouse, and family type to be handicapped to embody the strong image of women's empowerment. The reason of the failure of proxy variables to represent women's empowerment was that the empowerment was amultidimensional concept in its very nature, hence could not be measured by any of solo proxy variables. But this practice went on dueto the nonexistence of theappropriate toolsto measure empowerment. Use of education and employment as proxy for women's empowerment since 1980 remained prevalent in studies until recently to capture the women's autonomy, status and empowerment. Ethiopian Democratic and Health Survey (2005) justified the use of measures like education and employment as pertinent since they have been observed to be positively correlated with empowerment indicators.

Measures like education and employment were indirect indicators. Recently, scholars favored the use of even more direct measures. These direct measures contain a blend of quantifiable indicators that are classified into diverse dimensions of autonomy, like 'access to' and 'control over' resources, involvement in decisions related to economic and child-related matters, self-esteem, physical mobility, liberty from domestic vehemence, and political consciousness and participation. The hunt for more direct measures motivated the researchers to capturethe 'evidence' of

empowerment (Kishor, 2000). An extensively approved measure of evidence emerged was the women's contribution in familial decision making. This variable continued as being progressively used as an objective indicator of women's domestic empowerment, predominantly in health and demographic studies (Schuler &Hashemi, 1994).

Challenging efforts to quantity empowerment are found in a small number of studies (e.g., Jejeebhoy&Sathar,2001). Conceptualization of empowerment can be better highlighted through the measures of empowerment in gender and sociological literature because these disciplines have spent years on debating the complexities and they have reached a theoretical agreement on some points. They clarify the difference between "access to resources" and "control over resources" and according to them the sign of power is attached to the later (Mason, 1986).

Grasping the need of the multidimensionality of the concept of empowerment, different studies used blends of many dimensions to represent empowerment in different socio-cultural settings. During the decade of 1990s, we found work of some researchers using different dimensions of women's empowerment to construct indices.One of such leading effort was done by Schuler &Hashemi (1993),in which they measured changes in the status of women in Bangladesh, and they identified six domains (viz., mobility, economic safety, position, and decision-making power within the family, capacity to interact

efficiently in the public domain, and contribution in non-family clusters) to represent women's empowerment.In an effort to construct a women's empowerment index, Jejeebhoy (1995) included aset of indicators(viz., knowledge, decision-making, physical, emotional, economic, social and self-reliance). While, Stromquist (1995) studied the cognitive, psychological, economic and political indicators. Canadian International Development Agency (1996) utilized political empowerment, legal empowerment, social empowerment and economic empowerment (Malhotra et al., 2002). In the same year Hashemi et al. (1996) proposed fiscal security as an indicator of women's empowerment.

Schuler et al. (1996) focused on the decision-making power within the household and further suggested different set of indicators like capability to interact efficiently in the public domain, and contribution in non-family clusters. Sen (1999) introduced the indicators like; nonexistence of gender disparity in death and birth rates, and approach to elementary amenities such as schooling, access to focused training, higher education, and paid job, possession of property, domestic work, and decision-making. Kishor (2000) suggested monetary autonomy, involvement in the up-to-date sector, lifespan exposure to employment, sharing of roles and decision-making, family structure responsive to empowerment, equivalence in wedding, humiliation of women, women's liberation, matrimonial improvement, and customary wedding.

After the year 2000, multi-dimensional construct of women's empowerment became focus of the studies. Jejeebhoy and Sathar (2001) in a quantitative study in Pakistan and India used four dimensions of women empowerment (viz., decision making ability in economic sphere, physical mobility, liberty from husband's threat , and control over monetary resources).Highlighting the scope of different dimensions, Malhotra et al. (2002) declared that the legal and political dimensions were expected to be operationalized at much higher levels of accumulation (national/regional), whilst the economic, familial, and societal dimensions were frequently operationalized at the household or individual levels with some partial struggles at bearing in mind these at communal or institution level. Sridevi (2005) constructed a composite socio-economic index by combining five dimensions to construct women's empowerment. These dimensions were: control over own salary, looking after the family's income, helping the parent's family, spending on children's education, and financial decision on safety measures of health. In the same contemporary period, Parveen and Leonhauser(2005) also developed a composite socio-economic index of women's empowerment by utilizing six dimensions(viz.,economic support to household, access to resources, possession of assets, participation in household decision making, gender cognizance perception, and coping). It was a handsome effort to operationalize the multidimensional concept of women's empowerment because of its coverage of several facets of

women's empowerment.Three years later in Pakistan, Khan and Maan (2008) used socio-economic dimensions to construct a composite index of women's empowerment by including four dimensions: control over economic resources, participation in household decision making, participation in family discussion and social mobility of women. But they did not validate the index on sample of Pakistan.

The socio-economic and familial dimensions of women's empowerment have been used by many researchers (e.g., Khan &Maan, 2008; Sridevi, 2005; Parveen&Leonhauser, 2005). However, literature poses no evidence of the use of psychological empowerment in household level studies. Although some researchers fingeredthe needof psychological empowerment in the organizational set up(e.g., Conger &Kanungo, 1988; Malhotra et al., 2002; Spreitzer, 1995; Thomas&Velthouse, 1990).Stromquist (1995) emphasized the need to use psychological dimension along with other dimensions to measure empowerment by maintaining that empowerment was a socio-political notion that must consist of cognitive, economic, psychological, and political constituents. However, the significance of psychological empowerment in overall women's empowerment, motivated the experts in the field to use it with some proxy variables to operationalize this concept. Parveen and Leonhauser (2005), tried to address this deficiency by including coping with household shock in the composite women's

empowerment index. The above mentioned measure used selected dimensions to measure women's empowerment, no one ever tried to develop and validate a comprehensive measure by establishing psychometric properties of the measures used to measure women's empowerment. The psychological empowerment was ignored by all the researchers.

Objectives

Given that the notion of women's empowerment is inherently complicated and poses widespread measurement challenges (Malhotra & Schuler, 2005).The present research work aimed at addressing the gap in the existing literature linked to the construction of a comprehensive women's empowerment index comprising economic, familial, socio-cultural, and psychological dimensions (as suggested by Malhotra et al., 2002).To the best of our knowledge, no women's empowerment index is available in the existing scientific literature that covers economic, familial, socio-cultural, and psychological dimension.

The objectives of the present research were achieved in two separate studies. In study1, measures of economic, familial and social empowerment were separately constructed and their factorability was determined via exploratory factor analysis (EFA). In Study 2, a comprehensive, valid, and reliable composite index of women's empowerment was assembled by combing individualmeasures on four dimensions of women's empowerment via confirmatory factor analysis (CFA). For

psychological empowerment, items were randomly selected from Global Psychological Empowerment Scale (Batool&Batool, 2017).

Definitions of different dimensions of women's empowerment.

Psychological empowerment. Psychological dimension of empowerment was represented by four indicators: impact, meaningfulness, competence/self-efficacy, and choice/self-determination as recommended by Thomas andVelthouse (1990), and problem focused coping as recommended by ParveenandLeonhauser (2005).Meaningfulness refers to the value and importance a woman gives to her roles, duties, work, and purpose in life, in relation to her own standards or ideals. Competence/self-efficacy is the degree to which a woman feels that she is able to perform different tasks with skill and reflects confidence in the ability to exercise control over her own behavior, and social environment. Choice/self-determination is the sense of autonomy in taking initiative, making decisions and reveals the degree of autonomy in work, relationships, behaviors and processes. Impact is the degree to which a woman feels that she can exert strategic influence on family, and social circle, and perseverance in difficult situations. Problem focused coping reflects changing or removing the source of the stress.

Economic empowerment. Economic dimension of empowerment was represented by indicator 'control over economic resources' through economic

decision making at household level as indicated in literature (viz., Khan &Maan, 2008; Parveen&Leonhauser, 2005).

Familial empowerment. Familial dimension of empowerment was represented by two indicators: decision making within family and participation in household discussion following the literature (viz., Khan &Maan, 2008; Parveen&Leonhauser, 2005).

Socio-cultural empowerment. Socio-cultural dimension of empowermentwas represented by indicator like social mobility of women at different places as posed in literature (viz., Khan &Maan, 2008; Parveen&Leonhauser, 2005).

Study 1

Phase1

Items for the Measures of economic, familial, and social empowerment were empirically generated. A deductive approach was used to generate the items. For economic, familial, and social empowerment, we generated 20, 20, and 12 items respectively, based on the existing literature (e.g., Jejeebhoy&Sathar, 2001; Khan &Maan, 2008; Parveen&Leonhauser, 2005; Sridevi, 2005). After restructuring some of the items, and consensus of judges (one from each discipline psychology, economics, sociology, and gender studies) on the grounds of (a)

fidelity, (b) clarity, (c) redundancy, and (d) comprehensibility, 18, 16, and 10 items were retained at this stage for economic, familial, and social domains respectively.

A 5-point Likert type format of response was decided for economic, and familial dimension (1=*not at all* to5 = *to great extent*), and socio-cultural dimensions (1=*rarely* to 5 = *very often*). All the items related to economic, familial,and socio-cultural dimensions were constructed in Urdu.

After committee approach and tryout phase; 9, 10, and7 items were finalized for further processing.

Phase II

The theoretical structure and factorial validity of the three individual dimensions of women's empowerment via exploratory factor analysis (EFA) were determined.

Method

Participants

A sample of 202 women was recruited from major cities of Pakistan (Multan, Lahore, Islamabad, Peshawar, Quetta, and Karachi), age ranged between 21- 60 year (*Mean*= 39.5, *SD*= 10.70). The women belonged to diverse socio economic status and had education from matric to post graduation levels.Married women living with their husbands, and having at least one child were included in the study.

Unmarried women and those who were separated or divorced were not engaged in the study to maintain the homogeneity of the sample.

Materials and Procedure

A convenient sample technique was used to approach the sample. The items finalized after the tryout phase were used in EFA. Women were personally approached through personal contacts by the researcher at their homes or work places. Initially 300 women were contacted, but some of them were not fulfilling the inclusion criteria, some refused to take part in the study, and a few of the respondents did not complete the questionnaire. Hence, responses of 202 participants were found pertinent to be used in the final analysis. It took 40 to 45 minutes to complete the questionnaire in all dimensions. Assumptions of EFA (e.g., sample size, normality, linearity, and outliers among cases) were tested before the factor analysis of the data and the data were found to meet the criteria (Field, 2005).

Analysis and Results

Exploratory Factor Analysis (EFA)

In order to determine the underlying structure of the individual measures of women's empowerment, separate exploratory factor analyses (EFA) were run. The data of 202 women on 9, 10, and 7 items of economic, familial and social empowerment respectively were subjected to exploratory factor analysis individually by opting varimax rotation method. The initial solutions converged in

50 iterations for the three individual measures of economic, familial, and socio-cultural empowerment. Factor analyses for economic, familial, and socio-cultural empowerment were yielded by principal component analysis. Criteria given above by the experts in the field were kept in mind while making decisions regarding retaining items and factors in empowerment (e.g., Child, 1990; Kaiser, 1960; Nunnally, 1978). By following the criteria, one clear and interpretable structure appeared for economic empowerment, two factors structure appeared for familial empowerment, and one factor structure appeared for socio-cultural/ social empowerment. The SPSS 20.0 was used for the analyses.

Economic empowerment. In order to assess the factor structure of the measure of economic empowerment, 9 items were put to EFA, and a unifactor structure appeared in 50 iterations.

Table 1

Factor Loadings, Eigen Values, and Percentages of Variance on Economic Empowerment Measure (N =202)

	Factors		
Original/Final Items	1	2	3
1(1)	**.75**		

2(2)	**.87**		
3(3)	**.69**		
4(4)	**.78**		
5(5)	**.72**		
6			.99
7		.89	
8		.90	
9	.		.87
Eigen values	3.88	1.54	1.00
Percentages of variance	41.45	60.14	71.37

Table 1 shows that first five variables (1, 2, 3, 4 & 5) appeared to load on factor 1 and make a single factor. Variable 7 and 8 loaded on factor 2, and variable 6 and9 loaded on Factor 3. By following the criterion(Child, 1990) that a factor can be retained only if at least 3 variables load on it, we did not retain variable 6, 7, 8 and 9 on Factor 2 and 3. The 41.45 percent of variance in Economic Empowerment measure is accounted for by the five retained variables

Familial Empowerment. In order to assess the factor structure of the measure of familial empowerment 10 items were put to EFA, and two factors structure appeared in 50 iterations.

Table 2

Factor Loadings, Eigen Values and Percentages of Variance on Familial Empowerment Measure (N =202)

Items	Factors		
	1	2	3
1	.79		
2	.77		
3	.74		
4	.79		
5	.77		
6		.78	
7		.93	
8		.94	
9			.98
10	.64		.66
Eigen values	3.89	2.41	1.09
Cumulative Percentages	34.44	59.38	74.08

of variance

Table 2 shows that first five variables load exclusively on factor 1. These items illustrate the empowerment to take decisions in the family, so it was named as 'Decision Making within Family. Item 6, 7, and 8 load exclusively on Factor 2. These items illustrate the woman's participation in family discussion in the family, so this factor was labeled as 'Participation in Family Discussion'. Although variable 9 is highly loaded on Factor 3, and item 10 is loaded on all factors but Eigen value <1.0, so we did not retain item 9 and 10 by following the criterion (Child, 1990) that a factor can be retained only, if at least 3 items load on it.The 59.37 percent of variance in Familial Empowerment measure is accounted for by the eight retained items

Social empowerment. In order to assess the factor structure of the measure of social empowerment, 7 items were put to EFA, and one factor structure appeared in 50 iterations.

Table 3

Factor Loadings, Eigen Values, and Percentages of Variance on Social Empowerment Measure (N =202)

Items	Factors	
	1	2
1	.78	

2	.76	
3	.73	
4	.78	
5	.76	
6		.98
7	.60	.75
Eigen values	3.82	1.12
Cumulative Percentages of variance	47.23	70.57

Table 3 shows that first five variables load exclusively on factor 1 and a unifactor solution occurred. These items illustrate the empowerment of a woman to move independently outside the house, so this power of social mobility was named as 'Social Empowerment'. Item 6 is loaded on Factor 2 and item 7 is loaded on Factor 1 and Factor 2 both. Though these items show Eigen value >1.0, but we did not retain these items due to the reason that they do not make any structure by following (Child, 1990) criterion that a factor can be retained only, if at least 3 items load on it. The47.28 percent of the variance is accounted for by the five retained items in the measure of Social Empowerment.

Study 2

Study 2 was carried out to assemble four dimensions (viz., economic, familial, social, and psychological) of women's empowerment in order to confirm the structure of a comprehensive index of women's empowerment via CFA, and to establish the reliability of the measures.

Method

Participants

A sample of 500 women was recruited from five major cities of Pakistan (Lahore, Islamabad, Peshawar, Quetta, and Karachi), age ranged between 21- 60 year (Mean= 38.5, SD= 9.40).Married women living with their husbands were included in the study. The women belonged to diverse socio economic status and had education from matric to post graduation levels.Married women living with their husbands, and having at least one child were included in the study. Unmarried women and those who were separated or divorced were not engaged in the study.

Measures

All the measures of individual dimensions of women's empowerment (economic, familial, and social) constructed through EFA in Study 1, and 15 items randomly selected from Global Psychological Empowerment Scale for Women (see Batool&Batool, 2017) were used in Study 2.

Procedure

All the participants were personally approached via convenient sampling technique,and the data were collected from the Provincial Capitals of all the four provinces of Pakistan (i.e., Lahore, Karachi, Quetta, and Peshawar) and Federal Capital (Islamabad) to ensure the representation of women from all major parts of the country. Time and places to distribute the questionnaires and data collection were set on telephone prior to access the sample to make the appointments convenient. The women in the study were approached at their homes and work places. Initial 650 women were contacted, some refused to take part in the study, and some who promised to post the filled questionnaires did not return the questionnaires, as some did not complete the questionnaires in all dimensions. So the final sample that used in the analysis consisted of500 participants. It took 30-45 minutes to complete the set of questionnaire.

Analyses and Results

Confirmatory Factor Analysis (CFA)

The CFA were initially run to separately confirm the factor structure for the measures of four dimensions of women's empowerment (Economic, Familial, Social, and psychological), and finally CFA was run to test how all four dimensionswerecollectively related to Comprehensive Women's Empowerment

Index (as a latent variable). Structural Equation Model (SEM) was run by using AMOS 21.

Four CFA were run to confirm the factor structure of dimensions of women's empowerment appeared in EFA, so that these separate measures would be used to confirm as the constituent parts of the Women's Empowerment Index in the subsequent analysis.

Figure 1. Economic Empowerment

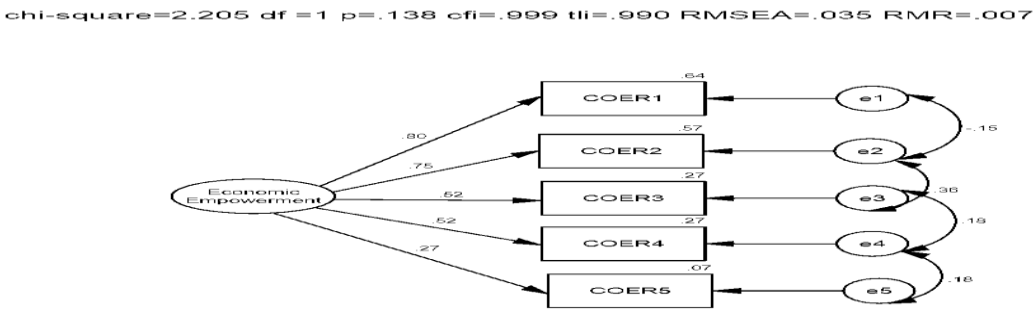


Figure 1: COER = Control over Economic Resources.

Figure2.Familial Empowerment

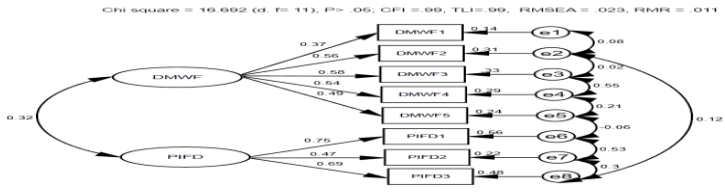


Figure 2. DMWF= Decision Making within Family, PIFD = Participation in Family Discussion.

Figure 3. Social Empowerment

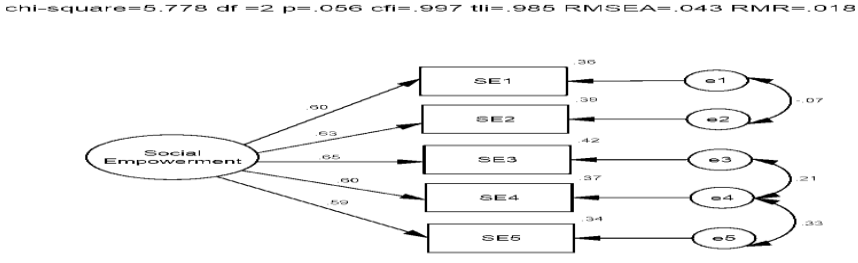
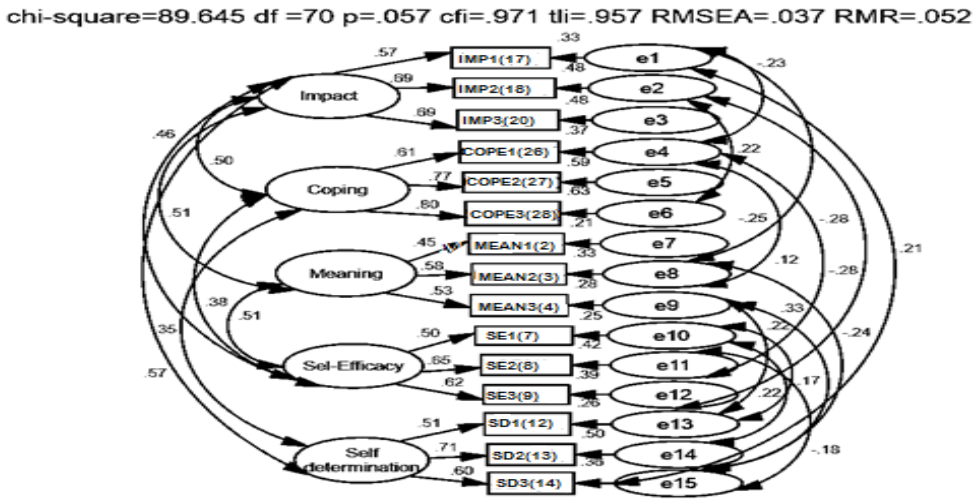


Figure 3.SE = Social Empowerment.



The Comparative Fit Index (CFI) criteria were used following Hu &Bentler (1999). The TLI > .90, Root Mean Square Residual (RMR) <.10 is normally considered adequate. Root Mean Square Error of Approximation (RMSEA) is related to residual in the model. RMSEA values range from 0 to 1 with a smaller RMSEA value indicating better model fit. The fit indices for all the models of four dimensions of women's empowerment were within the acceptable ranges recommended by (Hu &Bentler, 1999). The analyses validated the individual structures of economic, familial, social, and psychological empowerment.

Finally, the use of a structural equation modelling assisted to assemble individual measures to construct a Comprehensive Women's Empowerment Index (CWEI) comprising four dimensions. The analysis helped to check whether the individual dimensions (e.g., economic, familial, social, and

psychological) are able to construct the composite index via confirmatory factor analysis.

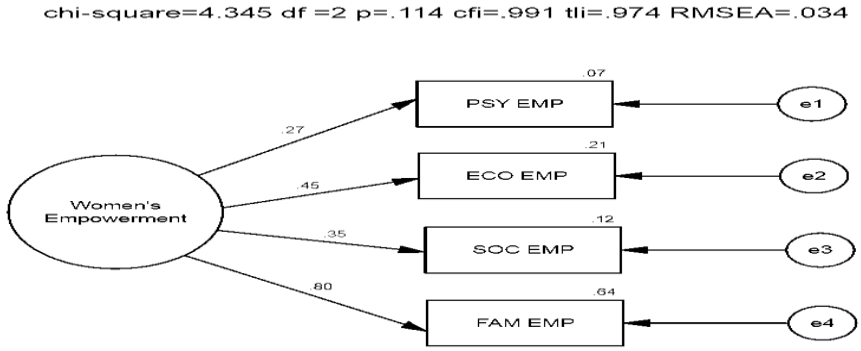


*Figure*4. Four measures (viz., PSY EMP= psychological empowerment, ECO EMP= economic empowerment, SOC EMP=social empowerment, and FAM EMP= familial empowerment), and Women's Empowerment= Composite Women's Empowerment Index.

Figure 5 shows that the individual dimensions (e.g., economic, familial, social, and psychological) are able to construct the composite indexof women's empowerment. The Women's Empowerment Index appears as a good fit model to the data on four measures of empowerments with the Chi Square = 4.345 (*d.f* = 2), P> .05; CFI =.99, TLI=.97, RMR = .03, and RMSEA = .034.

Table 4

Item Total Correlations for Individual Measures of Composite Women's' Empowerment Index (N =500)

Measures of Empowerment	Items	Correlations	Measures of Empowerment	Items	Correlations
Psychological				3	.72**
	1	.57**		4	.81**
	2	.58**		5	.77**
	3	.50**	Familial		
	4	.60**		1	.63**
	5	.52**		2	.60**
	6	.32*		3	.53**
	7	.31*		4	.63**
	8	.33*		5	.56**
	9	.71**		6	.56**
	10	.61**		7	.61**
	11	.60**		8	.62**
	12	.70**	Social		
	13	.64**		1	.58**
	14	.61**		2	.55**
	15	.51**		3	.50**
Economic				4	.57**
	1	.81**		5	.53**
	2	.79**			

Table 4 shows that all the items have significant positive correlations with relevant measures.

Table 5

Inter co-relations among Individual Measures and Composite Women's' Empowerment Index and Alpha Coefficients (N=500).

Measures	1	2	3	4	5
1.Psychological	-	.71**	.76**	.47**	.73**
2.Economic	-	-	.76**	.70**	.75**
3.Familial	-	-	-	.54**	.79**
4.Social	-	-	-		.61**
5.CWEI	-	-	-	-	-
Alpha coefficients	.87	.69	.74	.67	.88

Note. **p<.01

Results in Table 5 show that all dimensions of the CWEI have significant inter correlations and these all dimensions significantly correlate with the CWEI. The Table indicates that the highest sub-scales' inter-correlation exists between psychological and familial empowerment (.76), and economic and familial empowerment (.76). Whereas the highest correlation of CWEI with sub scales is found between CWEI and familial empowerment followed by economic, psychological and social empowerment. The Cronbach's alpha for psychological, economic, familial, and social measures and CWEI are .87, .69, .74, .67, and.88 respectively. These values of Cronbach's alpha show that all the individual measures, and the CWEI are internally consistent.

Discussion

The objectives of the research work were achieved in two studies. In study1 separate measures for economic, familial, and social empowerment were constructed and factor analyzed, and in Study 2 a comprehensive valid and reliable composite index of women's empowerment was constructed by combing individual scales of four dimensions of women's empowerment (viz., economic, familial, social and psychological).

The economic empowerment scale appeared to be a uni-dimensional valid and reliable measure (see Table 1 and Figure 1) that contains the items related to

control over economic resources like, purchase of consumable and durable household itemsthat augments their power of bargaining. Women's Control over resources, and their share in economic decision making at household level, fulfilling the fundamental needs, improve their self-sufficiency by minimizing their economic dependence. The retention of these items to measure economic empowerment is in line with (Blumberg, 2005) that for economic empowerment of women, it's not just paid job, earned income, or even ownership, unless it involves control of resources.

The familial empowerment appeared to be a two dimensional measure (i.e., Decision Making within Family' and 'Participation in Family Discussion'). The EFA (see Table 2) and CFA (see Figure 2) supported familial empowerment measure as a valid and reliable. The retained items are partially supported by (Malhotra et al., 2002) that familial dimension of empowerment covers the involvement of women in family decision-making e.g., capability to make childbirth decisions, use of contraception, access on the way to abortion, independence over choice of husband and marriage timing, freedom from household violence, and control over sexual relationships. The respondents of the present study appeared to be hesitant to discuss their family life, especially items related to use of contraception and sexual relationship, and these items resulted in low response rate, so these items were excluded from further analyses. The second dimension of familial empowerment is partially in line with (Siwal, 2009; Haque et

al., 2011) that women's contribution in household discussion anddecision-making enables her to be socially empowered and resourceful.

Social/ socio-cultural empowerment also appeared as a uni-dimensional measure. The items which were retained in EFA (see Table 3) illustrate that a woman is socially empowered when she attains the autonomy to avail the opportunities to move outside the house (i.e., Social Mobility). It appeared as a valid (see Figure 3) measure. Social empowerment in the present study is partially supported with (Siwal, 2009) that suggested social mobility as an important dimension among the indicators of socio-cultural empowerment in women. The items retained in the study are in line with Jejeebhoy and Sathar (2001); Khan and Maan (2008);Parveen and Leonhauser (2005); and Sridevi (2005) that utilized social mobility as the sole criterion to measure socio-cultural empowerment of women. Pakistani culture does not encourage common women to join different social groups and organizations, and household women are particularly committed to their household affairs, so we did not use other dimensions of social empowerment of women as suggested by Siwal (2009) (e.g., women's prominence in and access to public spaces; access to up-to-date transportation; involvement in non-familial groups and societal linkage etc.). However, our measure is not in line with Hague, Thiara, and Turner (2011); and Khan and Maan (2008) that social autonomy or physical mobility means

women's freedom to move to their required places without being accompanied by a male member.

Our preliminary discussion (discussion before starting work on scale development) with the participants showed that women in Pakistan do not consider moving alone outside home as an indicator of their social empowerment, most of them declared that they did not want to move alone. To them, they feel empowered if males at home escort them to move in market places, hospitals and other public places. So we used the statements in measure items on how frequently a woman visits different places rather with whom she visits public places, as women in the initial discussion told us that they did not feel convenient to move alone or unattended as Pakistani society is male dominated society, where they do not feel secure if they are not accompanied by a male figure (e.g., father, brother, son, or husband).

Psychological empowerment comprised five dimensions: Impact, Problem focused coping, Meaningfulness, self-efficacy, and self-determination (see Figure 4). The results are somewhat in line with (Parveen&Leonhauser, 2005) that the psychological empowerment includes increasing level of self-confidence, bargaining strength, liberty of choices, and coping capacities within households.

The CFA was also run on a Composite Women's Empowerment Index as a latent variable and four dimensions of empowerment (i.e., economic, familial, social, and psychological,) as observed variables which were treated as latent

variables in Study 1(see Figure 5).The Familial empowerment appeared as the most significant and strongest factor of composite women's empowerment index (CWEI) with the highest beta coefficient Family is the leading primary unit that supports women to be empowered in other domains. The women who are supported by their parents before marriage and by their husbands, and in-laws after marriage participate in domestic decision making and participate in family discussion.It means they are being given importance to have their say. When their voice is not hushed by the family, they attain confidence to move ahead in life. The increased role of women in the household decision-making would enable them to improve their self-determination, bargaining power, control over resources, self-esteem, autonomy, status and power relations within households (Parveen&Leonhauser, 2005). Which means the increased role of awoman in household decision-making goes a long way to empower her in other domains of her life.

Economic empowerment appeared as the second most important dimension ofCWEI. Economic empowerment is vital for women as it is a tangible empowerment that helps them to attain empowerment in other domains, andit further increases women's earning capacity and bargaining power (Parveen&Leonhause, 2005). Women's control over income, and over resources, role in household economic decision making, meeting the basic needs altogether improve their self-reliance, thereby reducing women's economic subordination.

Social empowerment appeared as the third important dimension of women's empowerment. Mobility alone is not an end itself rather it proves to be means to attain other ends, for example, the contribution and role of women's social mobility to help women to attain economic empowerment. The lack of women's physical mobility deprives them of getting better livelihood opportunities (Parveen&Leonhauser, 2005).

Psychological empowerment appeared as the fourth important dimension of women's empowerment. Oladipo (2009) highlighted the significance of psychological empowerment and proclaimed it to be a pre-requisite for economic development. The psychological empowerment gives a woman an increasing level of self-confidence, bargaining strength, liberty of choices, and coping capacities within households (Parveen&Leonhauser, 2005).

The results of the study support the multidimensionality of the concept of women's empowerment. The literature supports using economic, familial social, and psychological empowerment to measure women's empowerment collectively (e.g., Jejeebhoy&Sathar, 2001; Sridevi, 2005) and the fact that economic, familial, social, and psychological empowerment are interrelated and complement each other (e.g., Oladipo, 2009; Parveen&Leonhauser, 2005). The composite index in the present study could be partially supported by Schuler and Hashemi (1993), who used mobility, economic security, status and decision-making power within the

household, ability to interact effectively in the public sphere, and participation in non-family groups as the indicators of women's empowerment; Jejeebhoy(1995) who included a set of indicators like knowledge autonomy, decision-making autonomy, physical autonomy, emotional autonomy, economic and social autonomy, and self-reliance to constitute women's empowerment index, Canadian International Development Agency (1996), that utilized legal empowerment, political empowerment, economic empowerment and social empowerment; and Hashemi et al.(1996), and Kishor (2000), who proposed economic security and financial autonomy to form women's empowerment index.

Stromquist (1995) introduced psychological dimension of empowerment along with cognitive, economic, political indicators of women's empowerment. A composite index of women's empowerment in the present study is consistent with Parveen and Leonhauser (2005) as they used coping up quality with household stressors as a psychological indictors among the six indicators of empowerment.

The highest correlation appeared between familial empowerment and psychological empowerment, and familial empowerment and economics empowerment (see Table 5), which indicates that familial empowerment makes women psychologically sound as psychological empowerment increases the level of self-confidence, bargaining strength, liberty of choices and the coping capacities

within households (Parveen&Leonhauser, 2005). The correlation between familial empowerment and economic empowerment supports the bargaining theory that women earn incomes, their negotiating power within household increases and the economic, familial, and psychological empowerment boost up social empowerment. The second highest correlation of economic empowerment with psychological empowerment (see Table 5) supports the claim of Oladipo (2009) that psychological empowerment is a pre-requisite for economic development. According to Oladipo, various economic and communal programs of empowerment do not give expected outcomes due to the absence of the psychological make-up of the people who were tried to be empowered. People must be taken into consideration while constructing the policies. Failure to do so may consequent into negative outcomes, and wrong outlooks and behaviors may be demonstrated by the individuals in the absence of psychological empowerment, which may ultimately impede good policies of the government. Once people are empowered psychologically, there will be a transformation in the mind-sets, cognition and, attitudes which most certainly will consequent into a constructive change.

Implications

The study has immense scope. The development of CWEI is a pioneering work in the field that addresses the worth of the construct of psychological empowerment in addition to economic, familial, and social empowerment. The newly constructed

valid and reliable multidimensional index will open a new vista of research on women issues in relation to their economic, familial, social, and psychological empowerment.

Limitations and suggestions

The size of the sample of the study 1was not larger enough to generalize the results, so factor analysis in future should be run on a lager sample and the scale should be validated across varied cultures. In future studies on unmarried, divorced, widowed and uneducated women should also be included. The scales were self-report measures, so the factor of common method variance cannot be overlooked.

Conclusion

The newly constructed index of women's empowerment appeared to be comprised four well defined factors. The results indicate that economic, familial, social, and psychological empowerments are interrelated and complement each other. These four dimensions are significantly positively correlated and increased empowerment in one dimension leads to enhance the other one.

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