Substitute and Complementary Effects of Social Support on the Dimensions of Empowerment

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W.P. No. 2014-03-18
March 2014

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Abstract

The study examines the interactions among the effect of social support provided to an individual by three groups, viz., family, colleagues, and superior, on each dimension of psychological empowerment. On the basis of earlier studies we have considered the following six dimensions of psychological empowerment here: meaning, competence, impact, self-determination at job and organizational levels, and control in non-work domain. We hypothesized that there is substitute effect between family support (support received from family members) and workplace support (support provided by colleagues and superior) and that there is complementary effect between colleague and superior support. We also hypothesized that the interactive effect of all three forms of social support together will be positive.

This study was done for 401 women primary school teachers from 54 schools located in the state of West Bengal in India after a pilot survey of 288 respondents for pre-testing the instrument. The teachers rated their psychological empowerment and the family support available to them. Colleague support and superior's support was rated by the teachers' colleagues and superior respectively. On an average 2-3 colleagues responded for each teacher, resulting in total 1026 colleague responses. Inter-rater agreement was checked before aggregating colleagues' responses. Tests for substitute and complementary effects were done in two ways: one, by hierarchical regression analysis after applying the centering procedure and two, using the macro "simple-3way.sps" available with the statistical package SPSS 17.

As hypothesized, we found support for substitute and complementary effects. Employees having low colleague support required stronger family support to perceive greater meaning in their work (substitute effect). Similarly, employees having low superior's support need more family support to have better opinion of their competence, more impact of their work, and higher level of self-determination in organizational context. Our findings also showed that employees with supportive superior perceive more competence to do their work and greater self-determination in the organizational context if given further support by their colleagues, thus showing complementary effect. Interestingly, there is evidence of substitute effect rather than complementary effect for control in non-work domain. We also found that if support from all three groups is high then employees perceive more meaning in their work, greater self-determination in the job context, and better control in non-work domain.

Key words: social support, dimensions of psychological empowerment, substitute effect, complementary effect.

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Introduction

Few studies (e.g., Spreitzer, Kizilos, & Nason, 1997) have focused on factors affecting each individual dimension of empowerment. In the psychological or individual empowerment literature the concentration is on empowerment coming from work domain of an employee. In particular, Spreitzer's (1995) four dimensions of empowerment pertain essentially to the work domain. Literature that takes into account power coming from non-work domain aspects of an employee is still scarce (except for Schulz, Israel, Zimmerman & Checkoway 1993; Singh & Sarkar, 2009). Antecedents of psychological empowerment studied in literature also focus on social support from superiors and peers. Family support as an antecedent to empowerment has been largely neglected. At the same time, although supports from family, superiors, and peers are different, these supports emanating from work and non-work domains are inter-related (Staines, 1980). It leads us to explore whether social supports from different sources are substitutable or complementary. The objectives of this study are (a) to understand how each dimensions of empowerment is being affected by the social support coming from family, superior, and colleagues (b) to explore whether these support sources are complementary or substitutable for each individual dimension of empowerment.

Social Support

Social support is the resource provided by significant others in terms of emotional concern, instrumental aid, information, and appraisal (House, 1981). Three distinct forms of social support are considered (Kaufman & Beehr, 1986; King, Mattimore, King & Adams, 1995) based on the source from which support is provided - (a) supervisors, (b) colleagues and (c) family/friends. In this study superior's support has been defined in terms of the supportive nature of the superior in her/his working relationship with the subordinate (Graen & Uhl-

Bien, 1995). We have defined colleague support as emotional and instrumental aids provided by coworkers in the workplace. Family support has been defined as the extent to which there is possible emotional and observable assistance from members of family.

Dimensions of Psychological Empowerment

Based on empowerment construct studied by earlier researchers (Conger & Kanungo, 1988; Thomas & Velthouse, 1990; Spreitzer, 1995) we have taken the psychological empowerment as employee experienced powerfulness (Spreitzer, 1992, 1996; Menon, 2001). Individual's alignment of her/his own value system with her/his work constitutes the meaning dimension. As mentioned by Hackman and Oldham (1980) meaningfulness comes when an activity becomes relevant for one's value system and it is opposite to self-estrangement dimension of work-alienation. In sociological sense, a work can be empowering and meaningful when individuals are aware about other alternatives, and yet deliberately "chose" the work (Kabeer, 1999; Malhotra, 2002). Scribner, Truell, Hager, & Srichai (2001) showed that meaning dimension of empowerment is higher for women teachers compared to male teachers. Competence is equated with the self efficacy concept propounded by Bandura (1977). It is the individual's belief in her/his ability to perform a task. Impact dimension shows whether employees feel that they are making a difference in their organization through their work. This dimension of empowerment has often been equated with perceived organizational control and it is opposite in notion with learned helplessness (Seligman, 1975) and "powerlessness" dimension of alienation (Seeman, 1959).

Self determination is similar to the autonomy dimension of job diagnostic survey developed by Hackman & Oldham (1975, 1976). Spreitzer et al. (1997) referred this as affective domain dimension. It is individual's scope for taking decisions to do her/his job and is

focused on the process part of the work. It is also about pro-activity on work strategies, methods, pace, effort, etc. Self determination has two aspects – one in exercising authority at immediate job level and the other in broader organizational context related to broader policy level issues (Short & Rhinehart, 1992; Singh & Sarkar, 2009). According to Thomas & Velthouse (1990) self determination from life in general can give sense of empowerment. This aspect has been operationalized through another dimension known as control in non-work domain. This is an employee's ability to take decisions at household and immediate community level (Singh & Sarkar, 2009). Researchers (e.g., Wallen, 2002; de Janasz, Sullivan, & Whiting, 2003) have shown that the boundary between work place and home is gradually diminishing. Clark (2000) in Work/ Family Border Theory addressed how family and work domains of an individual are inter-connected despite being different. Ashforth, Kreiner & Fugate (2000) emphasized the need for research focusing on greater integration between home and work domain.

The Conceptual Framework & Hypotheses

Relationship between Social Support and Dimensions of Empowerment

The theoretical grounding of the contextual influence of social support on psychological aspects of empowerment lies in the theories related to ecological-evolutionary model of human development. Ecological psychology (Barker, 1968) refers to multiple microsystems like work, family, etc. that any individual is connected to. Lewin (1947) asserted that each individual's behavior should be understood in the context of social ecology, termed as "life space" of family, peers and organization. This forms the genesis of studies which emphasize the importance of non-work domain elements with relation to work domain. Social capital theory (Bourdie, 1986; Putnam, 1995; Field, 2005; Alfred, 2009) looks at social networks and their role in enhancing individual's value. Four aspects which form

important components of social capital theory are networks, resources, norms, and trust. These four components have important impact on individuals. Assumption of social capital theory is that an individual's family, friends, and associates constitute as important resource that can influence individual's power and decision. Interdependency theory (Gonzalez & Griffin, 1997; Rusbult & Arriaga, 1997) focuses on the patterns and basis for human interactions. Interdependence theory mentions that individuals' attitudes, beliefs and dispositions are influenced through long-term relationships. All these theories put together support that individuals' cognition need to be studied in the broader context of both work and non-work domains.

Social support and meaning. Spousal support has been found (Arnott, 1972) as playing significant role in determining whether the employment would have a negative implication for the family system, and this particularly holds relevant for married women. Husband's support has also been found as pivotal in reducing women's conflict (Kundsin, 1974; Beutell & Greenhaus, 1982; Berkowitz & Perkins, 1984) and likely to make the job more meaningful. Goldthorpe, Lockwood, Bechhofer & Platt (1968) amongst industrial workers found that workers spend a great deal of time talking to their work mates. Supportive colleagues through their day-to day advices, interactions, suggestions and tangible supports are likely to make the work more interesting and meaningful. Support from supervisor might substantially decrease an individual's negative feelings about a job (Baker, Israel, & Schurman, 1996). Feedback from superiors has been seen as significant predictor of meaningfulness (Johns, Xie, & Fang, 1992). Hence, we can say that social support will enhance the meaningfulness of the job for an individual.

H1.1a. Employees perceive greater meaning in their work if they sense more support of their family.

H1.1b. Employees perceive greater meaning in their work if their colleagues provide more support.

H1.1c. Employees perceive greater meaning in their work if their superiors provide more support.

Social support and competence. Social Comparison Theory (Festinger, 1954) suggests that subjective evaluation of one's ability would be strongly influenced by the associations of other people. Previous studies (Martire, Stephens, & Townsend, 1998; Haslam, Pakenham, & Smith, 2006; Khan, Iida, Stephens, Fekete, Druley & Greene, 2009) showed spousal emotional support enhances self efficacy beliefs of individuals. Social supports from friends have been found to be positively related to social competence (Procidano & Heller, 1983). In the teachers' context Tschannen-Moran, Woolfolk-Hoy & Hoy (1988) found teachers' perceived support received from colleagues is related to teachers' self efficacy. Support from family, colleagues and superiors might enhance an individual's belief on her/his ability.

H1.2a. Employees perceive having greater competence in their work if they sense more support of their family.

H1.2b. Employees perceive having greater competence in their work if their colleagues provide more support.

H1.2c. Employees perceive having greater competence in their work if their superiors provide more support.

Social support and impact. Supportive co-workers help employees to complete organizational tasks (Berman, West, & Richter, 2002). Support from co-workers has been found to have a positive influence on productivity (Shadur, Kienzle, & Rodwell, 1999). Similarly support from superiors in the workplace is likely to help employees to be more

effective. Positive encouragement from family is also likely to encourage an employee in creating an impact in the workplace.

H1.3a. Employees perceive making greater impact through their work if they sense more support of their family.

H1.3b. Employees perceive making greater impact through their work if their colleagues provide more support.

H1.3c. Employees perceive making greater impact through their work if their superiors provide more support.

Social support and self-determination in job context. Based on Self Determination Theory (Gagne, & Deci, 2005) we can argue that inadequate social support can lead to significant demotivation. In the context of students it has been found that social support network can significantly affect students' autonomy and competence (Reeve, Bolt, & Cai, 1999). Deci & Ryan (1985) found interpersonal support enhanced self-determined motivation. Positive support from family, superiors and colleagues are likely to encourage individuals to exercise choices at immediate job level.

H1.4a. Employees perceive greater self-determination in their job context if they sense more support of their family.

H1.4b.   Employees perceive greater self-determination in their job context if their colleagues provide more support.

H1.4c. Employees perceive greater self-determination in their job context if their superiors provide more support.

Social support and self-determination in organizational context. Based on Self Determination Theory (Gagne, & Deci, 2005) one can argue that superiors can create autonomy-supportive work climates where subordinates' competency can be nurtured,

subordinates can be given more freedom to exercise their choices, and bring forth self initiatives in the workplace which in effect enhance self perceived motivation of individuals (Koestner, Ryan, Bernieri, & Holt, 1984; Deci, Eghrari, Patrick, & Leone, 1994). Support from colleagues and family members are likely to help individuals to exercise their authority regarding the policy level decisions in an organization.

H1.5a. Employees perceive greater self-determination in organizational context if they sense more support of their family.

H1.5b. Employees perceive greater self-determination in organizational context if their colleagues provide more support.

H1.5c. Employees perceive greater self-determination in organizational context if their superiors provide more support.

Control. Family domain and work domain are recognized as most significant domains for any individual (Rane & McBride, 2000). Researchers (Kinnuen & Mauno, 1998; Newman & Mathews, 1999; Wadsworth & Owens, 2007) are interested in exploring how these two domains interact. Wadsworth & Owens (2007) found that positive effect of social support from superior and co-workers spills over to home and influences individual's general attitude about life.
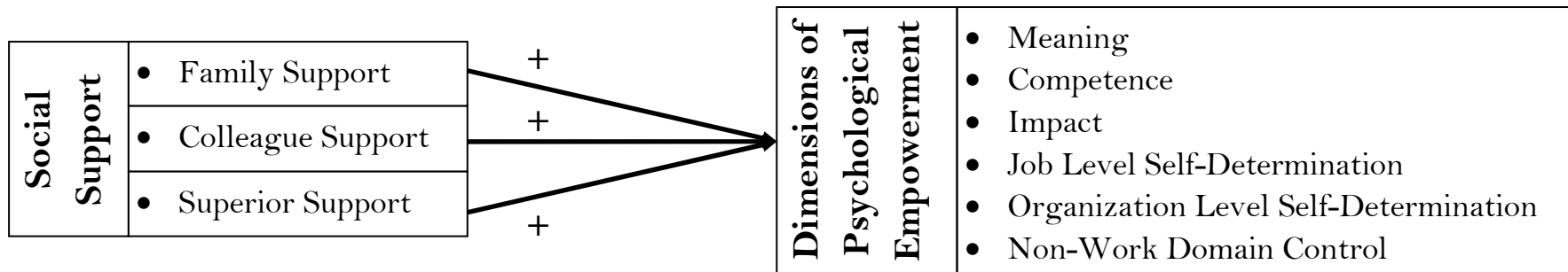
H1.6a. Employees perceive greater control over non-work domain if they sense more support of their family.

H1.6b. Employees perceive greater control over non-work domain if their colleagues provide more support.

H1.6c. Employees perceive control over non-work domain if their superiors provide more support.

Figure A depicts the relationship between social support and dimensions of psychological empowerment.

Figure A: The Conceptual Framework

Social Support	+ + +	Dimensions of Psychological Empowerment
• Family Support • Colleague Support • Superior Support	→	• Meaning • Competence • Impact • Job Level Self-Determination • Organization Level Self-Determination • Non-Work Domain Control

Substitute and Complementary Effects of Social Support on Dimensions of Empowerment

The quality of an individual's work experiences is expected to affect the quality of non-work experiences. The Compensation Theory (Faunce & Dublin, 1975) suggests that work and non-work experiences are negatively related. Two versions of compensation are discussed in work-family literature (Edwards, & Rothbard, 2000). One version shows individuals' tendency to decrease involvement (in terms of perceived time, attention & importance assigned to a domain) from the dissatisfying to a potentially satisfying domain (Champoux, 1978; Staines, 1980). According to the second version, individual's respond to dissatisfaction in one domain by seeking rewards (which include experiences that fulfill an individual's desires and make her/him satisfied) in another domain (Champoux, 1978; Kando & Summers, 1971). This version of compensation has two forms, supplemental and reactive. Supplemental compensation are the ones where insufficient positive experiences in one domain lead to seeking out rewards from other domain, and thereby ensuring that cumulative accumulations of rewards from both the domains become satisfying (Kando & Summers, 1971; Staines, 1980). According to the reactive compensation, excessive negative experiences in one domain leads individuals to seek redress through contrasting experiences in other domain (Kando & Summers, 1971).

On the basis of Compensation Theory we can argue that if individuals do not get adequate support from work-domain (involving superior and colleagues) then it is more likely that they would depend on the support coming from the non-work domain, like family.

Hypothesis 2: If the colleague support is low, the family support has a greater positive effect on each dimension of empowerment than in a situation with a high level of colleague support (substitute effect).

Hypothesis 3: If the superior's support is low, the family support has a greater positive effect on each dimension of empowerment than in a situation with a high level of superior's support (substitute effect).

Within the same work-domain it is likely if superior's support is high then supportive colleagues are likely to act as complementary support system for enhancing individual dimension of employee's empowerment.

Hypothesis 4: If the superior's support is high, the colleague support has a greater positive effect on each dimension of empowerment than in a situation with a low level of superior's support (complementary effect).

There is increasing evidence that social support from both within and outside the work can buffer the impact of occupational stress (House, 1981). Spillover Theory (Meissner, 1971; Champoux, 1978; 1980) suggests that work and non-work relationships are positively linked. There are two versions of Spillover Theory (Edwards, & Rothbard, 2000), one which focuses on positive association between work, family values, and satisfaction and the other version emphasizes experience generated in one domain is reflected in another domain.

If social supports from all relevant sources like family, colleagues, and superiors are provided then it is likely to have positive impact on each dimensions of empowerment.

Hypothesis 5: The interactive effect of the three forms of social support taken together has a positive effect on each dimension of empowerment.

Method

Sample

Social support, particularly family support is very important in the context of women. One of the interesting work areas to test our hypotheses is that of primary school teachers. In

India, this is a stereotypical job for women and women outnumber their male counterparts in the urban areas of all major states in India (UNESCO, 2000). Unfortunately, despite so many initiatives for gender inclusivity, women in many Indian families are not encouraged to have high career aspirations, their self esteem remains low and they are expected to work in stereotypical jobs (Kabeer, 2005). Primary school teachers' job is considered an extension of the nurturing role of women and they are not provided training (Dyer, 1996) beyond the basic requirements. The general qualification of the teachers is considerably low (Kaushik, Shah, Chavan, Dyer, Ramachandran, & Sharma, 2009).

Data was collected from the state of West Bengal in India during July to December 2008 after detailed interviews of thirty teachers and pre-testing the instrument in a pilot survey of 288 respondents. 401 teachers from 54 schools rated their psychological empowerment and the family support available to them. Colleague support and superior support was rated by the teachers' colleagues and superior respectively. On an average there were 2-3 colleagues for each teacher and so in all 1026 responses from colleagues.

The sample characteristics for this study are as follows: average age of the teachers = 41.47 years (s.d. = 10 years), average total teaching experience = 13.56 years (s.d. = 10.58 years), and average experience at current school = 10.91 years (s.d. = 9 years). 13.9% of these teachers were under-graduate, 66.9% were graduates, and 19.2% held masters' degree. 75.6% of the teachers were married.

Variables

Standard scales were used to measure psychological empowerment and social support.

Dependent. Psychological empowerment in our study is a second-order latent variable having six first-order dimensions. Based on the focus of this study, dependent variables are

these first-order dimensions. The following scales given in Singh & Sarkar (2009) are used to measure these six dimensions.

1. **Meaning**: This scale has the following three items *"My life's value matches with the teaching activity that I perform in this school"*, *"This job helps me to become what I want to become"*, and *"As a person I improve myself by doing this job"*.

2. **Competency**: This scale has six items including *"I am excellent in planning, organizing and structuring my instruction"*, *"I have mastery over the subject(s) that I teach"*, and *"I am adept in varying teaching techniques whenever needed"*.

3. **Impact**: This four-item scale includes *"My impact on student's learning is large"*, *"I have large impact on shaping future career of my students"*, and *"I have great impact on influencing values in my students"*.

4. **Job Level Self-Determination**: This scale has the following three items "I *give major inputs in selection of content, topics, and skills to be taught to the students"*, *"I exercise my judgment with respect to lesson scheduling"*, and *"I give major inputs on selection of textbooks and other instructional materials"*.

5. **Organization Level Self-Determination**: The three items in this scale are *"Whenever any changes occur in the school policy (e.g., school timing, student's strength I actively participate in discussions and give my inputs)"*, *"I actively participate and give my inputs in decisions to hire new teachers"*, and *"I exercise authority in deciding how and when I would perform administrative work (not related to teaching)"*.

6. **Non-Work Domain Control**: This scale has five items, which includes *"I influence decisions that affect others (e.g. members of my family, neighbors, locals) around me"*, *"I can formulate and implement most of the decisions in my life"*, and *"My experience is that majority of the happenings in my life is within my control"*.

Control. Three control variables in this study are: total experience, education, and marital status. Total experience is the actual teaching experience in months spanning her entire career. Education is a coded variable where 0 is for education attainment up to higher secondary school level, 1 for graduation level, and 2 for post-graduation or higher level. Marital status is coded as a dichotomous variable, 0 for single and 1 for married.

Independent. In our study social support network comprises three groups: family, colleague, and superior (Fenlason & Beehr, 1994). Scales given in Singh & Sarkar (2009) are used to measure the support provided by all three groups.

1. **Family Support**: The five-item scale includes "Members of my family cooperate with me to get things done around the house", "My family members fully understand the demands of my work", and "Members of my family always seem to make time for me if I need to discuss my work".

2. **Colleague Support**: Seven items in this scale includes *"There is great deal of co-operative effort among teachers"*, *"Teachers make conscious effort to coordinate the content of courses with other teachers"*, and *"She receives helpful ideas/feedback from her colleagues"*.

3. **Superior's Support**: There are six items in this scale. Sample items include *"My help/suggestions enables her to escalate her performance to a much higher level"*, *"I understand her problems and needs"*, and *"I recognize her potential"*.

Raters were requested to assess dependent and independent variables on a seven point scale, 1 indicating complete disagreement with the items given in the questionnaire and 7 indicating complete agreement. Prior to aggregating colleagues' responses, we tested one-way random average measures (consistency) Intra-Class Correlation (ICC) (McGraw & Wong, 1996). 224 teachers were rated by 3 colleagues each and 177 teachers were rated by

2 colleagues each. We calculated ICC for two samples separately. ICCs for all items were significant at p≤0.001, except for an item of job involvement and an item of innovative behavior in the second sample, which were significant at p≤0.01.

Convergent and discriminant validities of all the multi-item first-order latent variables in the study were analysed. Convergent validity was checked using Cronbach alpha, construct reliability, and average variance extracted of all multi-item variables (see Table 1). All values were above the desired cut-off, 0.7 for Cronbach alpha and construct reliability (Hair, Anderson, Tatham, & Black, 1998) and 0.5 for average variance extracted (Fornell & Larker, 1981). We used the test for discriminant validity suggested by Fornell & Larcker (1981) that the items should share more common variance with their respective constructs. This is indicated by average variance extracted been more than the squared correlations of all the first order latent variables. All variables in our study satisfied this condition.

Table 1: Means, Standard Deviations, and Correlations among Variables

Variables	mean	s.d.	1	2	3	4	5	6	7	8	9	10	11	12	Cronbach α	construct reliability	average variance extracted
1. meaning	6.335	0.787	1	0.391***	0.365***	0.372***	0.165***	0.300***	0.169***	-0.089	0.097	0.282***	0.238***	0.101*	0.76	0.76	0.52
2. competence	5.812	0.880		1	0.532***	0.549***	0.276***	0.370***	0.169***	-0.029	0.057	0.246***	0.080	0.145**	0.879	0.88	0.56
3. impact	5.671	0.979			1	0.505***	0.365***	0.321***	0.199***	-0.083	0.033	0.185***	0.072*	0.136**	0.767	0.8	0.50
4. job level self-determination	5.620	1.076				1	0.348***	0.310***	0.215***	-0.025	0.123*	0.161***	0.172***	0.165***	0.69	0.73	0.50
5. organization level self-determination	3.849	1.584					1	0.286***	0.094	-0.048	0.034	0.146**	0.139**	0.050	0.74	0.74	0.50
6. non-work domain control	5.604	1.017						1	0.172***	-0.079	0.020	0.572***	0.252***	0.053	0.835	0.84	0.52
7. total experience	162.71	126.356							1	-0.218***	0.228***	0.042	0.023	-0.091	----	----	----
8. education	1.05	0.572								1	-0.143**	0.010	-0.085	0.020	----	----	----
9. marital status	0.756	0.430									1	-0.011	0.089	-0.031	----	----	----
10. family support	6.134	1.106										1	0.182***	0.022	0.932	0.88	0.61
11. colleague support	6.174	0.452											1	0.055	0.878	0.87	0.51
12. superior support	5.937	0.880												1	0.934	0.92	0.66

N=401
*** $p \leq 0.001$; ** $p \leq 0.01$; * $p \leq 0.05$; two-tailed tests.

Analyses

We used multiple regression analysis to test our hypotheses. In models 1, 3, 5, 7, 9, and 11 we tested the main effects using the following equation:

$y_i = \alpha_i + \beta_{1i} \text{ total experience}_i + \beta_{2i} \text{ education}_i + \beta_{3i} \text{ marital status}_i + \beta_{4i} \text{ family support}_i + \beta_{5i} \text{ colleague support}_i + \beta_{6i} \text{ superior's support}_i + \varepsilon_i$

where y_i is the dimension of empowerment, i.e., meaning or competence or impact or job level self-determination or organization level self-determination or non-work domain control,

α is the constant term, βs are the coefficient terms, and ε is the error term.

The variables were entered into the regression equation in two steps. In the first step, we entered the control variables and the independent variable shown in the equation above. Then in the next step we added the two-way interaction terms obtained by multiplying two independent variables at a time and the three-way interaction term obtained by multiplying all the three independent variables (Blalock, 1965). One of the final equations is given below as an example.

$meaning_i = \alpha_i + \beta_{1i} \text{ total experience}_i + \beta_{2i} \text{ education}_i + \beta_{3i} \text{ marital status}_i + \beta_{4i} \text{ family support}_i + \beta_{5i} \text{ colleague support}_i + \beta_{6i} \text{ superior's support}_i + \beta_{7i} \text{ (family support * colleague support)}_i + \beta_{8i} \text{ (family support * superior support)}_i + \beta_{9i} \text{ (colleague support * superior support)}_i + \beta_{10i} \text{ (family support * colleague support * superior support)}_i + \varepsilon_i$

where α is the constant term, βs are the coefficient terms, and ε is the error term. For other equations meaning will be replaced by other dimensions of empowerment like competence or impact or job level self-determination or organization level self-determination or non-work domain control.

Aiken and West (1991) suggested using centering procedure for regression analysis using interaction terms. We used this method and found that variance inflation factors in all the equations were well within desirable limit.

To test the moderation effects we also used the macro "simple-3way.sps" available with the statistical package SPSS 17. Along with the significance of the interaction terms, the output also provided information regarding the simple slopes of the dependent variable on the independent variable for high and low values of moderators. The high value was taken as mean + 1 standard deviation and the low value was mean – 1 standard deviation. On this basis graphical plots were drawn for two-way interactions and three-way interactions (Hmieleski and Baron, 2009). The extreme points for the independent variable were taken by adding and subtracting 2 standard deviations from the mean value. Similarly, in case of three-way interaction, graphical plots were drawn for four lines: both moderators been low, moderator 1 been high and moderator 2 been low, moderator 1 been low and moderator 2 been high, and both moderators been high. In our graphs, we have taken family support as independent variable, colleague support as moderator 1, and superior support as moderator 2.

Results

Table 1 presents mean, standard deviation, and bivariate correlations for the variables in the study along with Cronbach α, construct reliability, and average variance extracted for all multi-item variables. All the six dimensions of psychological empowerment are significantly correlated with each other. These correlations are in the range of 0.165 to 0.549. Among the independent variables only the bivariate correlation between family support and colleague support is significant (r = 0.182 at p ≤ 0.001). There are significant correlations between most of the dependent and independent variables.

Controls & Main Effects

Results of the hierarchical regression analysis are presented in Table 2. Among the control variables, total experience significantly affected all dimensions of empowerment except the self-determination in organizational context. The other two control variables, education and marital status, did not affect any dimension of dimension at $p \leq 0.05$ (as shown in Table 2).

Table 2: Results of Hierarchical Regression Analyses:
Effects of Family, Colleague, and Superior Support on Dimensions of Empowerment

Independent Variables	Meaning		Competence		Impact		Job Level Self-Determination		Organization Level Self-Determination		Non-Work Domain Control	
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9	Model 10	Model 11	Model 12
Controls												
Total Experience	0.145^{**}	0.108^{*}	0.169^{***}	0.142^{**}	0.198^{***}	0.176^{***}	0.214^{***}	0.192^{***}	0.085	0.077	0.146^{***}	0.149^{***}
Education	-0.040	-0.062	0.009	-0.002	-0.045	-0.048	0.039	0.022	-0.022	-0.020	-0.045	-0.047
Marital Status	0.048	0.061	0.024	0.018	-0.015	-0.018	0.075	0.074	0.004	-0.007	-0.025	-0.027
Main Effects												
Family Support	0.242^{***}	0.181^{***}	0.231^{***}	0.225^{***}	0.168^{***}	0.148^{**}	0.124^{**}	$0.095^{\dagger}$	0.122^{*}	0.142^{**}	0.539^{***}	0.513^{***}
Colleague Support	0.177^{***}	0.164^{***}	0.024	0.001	0.026	0.013	0.131^{**}	0.112^{*}	0.110^{*}	$0.096^{\dagger}$	0.147^{**}	0.146^{***}
Superior Support	0.101^{*}	0.064	0.154^{***}	0.151^{**}	0.149^{**}	0.155^{**}	0.176^{***}	0.149^{**}	0.049	0.066	0.046	0.032
Two-Way Interactions												
Family Support x Colleague Support		-0.177^{***}		-0.002		0.021		-0.027		0.075		0.062
Family Support x Superior Support		-0.020		-0.125^{*}		$-0.105^{\dagger}$		-0.034		$-0.108^{\dagger}$		0.045
Colleague Support x Superior Support		-0.049		0.137^{**}		-0.029		0.064		0.125^{*}		-0.108^{*}
Three-Way Interaction												
Family Support x Colleague Support x Superior Support		0.133^{*}		0.061		0.067		0.122^{*}		-0.010		0.092^{*}
Overall Adjusted R^2	0.140	0.199	0.097	0.121	0.082	0.092	0.112	0.125	0.030	0.043	0.366	0.376
df	6, 394	10, 390	6, 394	10, 390	6, 394	10, 390	6, 394	10, 390	6, 394	10, 390	6, 394	10, 390
Overall F	11.873^{***}	10.953^{***}	8.164^{***}	6.510^{***}	6.969^{***}	5.046^{***}	9.439^{***}	6.736^{***}	3.059^{**}	2.815^{**}	39.550^{***}	25.072^{***}

Standardized coefficients are shown. N=401

*** $p \leq 0.001$; ** $p \leq 0.01$; * $p \leq 0.05$; † $p \leq 0.10$; two-tailed tests.

Meaning. Hypotheses 1.1a and b found strong support (β = 0.242 and 0.177 respectively at $p \leq 0.001$) and hypothesis 1.1c found weak support (β = 0.101 at $p \leq 0.05$) (see Table 2, model 1). It means that employees perceive greater meaning in their work if they sense more support of their family and are provided more support by their colleagues. The support provided by their superior also enhances perceived meaning of their work.

Competence. Competence was significantly affected by family and superior supports (β = 0.231 and 0.154 respectively at $p \leq 0.001$ in model 3 of Table 2), thus supporting hypotheses 1.2a and c. Surprisingly hypothesis 1.2b, which stated that employees perceive having greater competence in their work if their colleagues provide more support, was not corroborated by our results.

Impact. Similar to competence, impact is also affected by family and superior supports (β = 0.168 at $p \leq 0.001$ and 0.149 at $p \leq 0.01$ respectively) but not by colleague support. So hypotheses 1.3a and c found strong support but hypothesis 1.1b was not supported (see Table 2, model 5). It means that employees perceive greater impact of their work if they sense more support of their family and are provided more support by their superior. The support provided by their colleague did not seem to create any positive perception regarding impact of their work.

Job Level Self-Determination. Interestingly, this is one dimension of psychological empowerment that is influenced by support from all three groups. Hypothesis 1.4 a, b, and c are all supported here (β = 0.124 and 0.131 at $p \leq 0.01$ and 0.176 at $p \leq 0.001$ respectively for family, colleague, and superior supports in model 7 of Table 2). This implies that employees perceive greater self-determination in their job context if supported by family, colleagues, and superior.

Organization Level Self-Determination. There is weak support for hypotheses 1.5a and b (β = 0.122 and 0.110 respectively at $p \leq 0.05$) and no support for hypothesis 1.5c (see Table 2, model 9). It means that employees perceive more self-determination in their organizational context if they sense more support of their family and are provided more support by their colleagues. Another surprising result is that the support provided by their superior did not augment employees' organizational level self-determination.

Non-Work Domain Control. This dimension of empowerment was significantly affected by family and colleague support (β = 0.539 at $p \leq 0.001$ and 0.147 at $p \leq 0.01$ respectively in model 11 of Table 2), thus supporting hypotheses 1.6a and b. Hypothesis 1.6c, which stated that employees perceive having greater control in non-work domain if their superior provides more support, was not substantiated by the results of our study.

Adjusted R^2 for models 1, 3, 5, 7, 9, and 11 vary from 3% to 36.6%. Explanatory power is highest for the model with non-work domain control as the dependent variable and is lowest for organization level self-determination.

Interaction Effects

Substitute Effect. Results of the hierarchical regression analysis presented in Table 2 strongly supports hypothesis 2 for the meaning dimension (β = -0.177 at $p \leq 0.001$). This result implies that there is a strong substitute effect between family and colleague supports. Employees perceive more meaning in their work if they sense more support of their family where support provided by colleagues is low. The substitute effect between family and colleague support is not substantiated for other dimensions of psychological empowerment by our results. On the other hand, the substitute effect between family and superior's support (hypothesis 3) is weakly significant for competence (β = -0.125 at $p \leq 0.05$ in model 4), impact (β = -0.105 at $p \leq 0.1$ in model 6), and self-determination in

organizational context (β = -0.108 at p ≤ 0.1 in model 10). In case of less support provided by the superior, the family support has a greater positive effect on the perceived competence to do the work, impact of the work, and self-determination in the context of their organization. The other three dimensions, meaning, job level self-determination, and non-work domain control do not validate the substitute effect (see Table 2, models 2, 8, and 12).

Simple regression lines of the effect of family support on dimensions of empowerment at low and high levels of colleague and superior support are given in Table 3. In case of meaning, competence, impact, and job level self-determination (unstandardized β = 0.385, 0.359, 0.303, and 0.318 respectively), the slopes are significantly positive at p ≤ 0.001 only if both colleague and superior supports are low, thus indicating the substitute effect put forward in hypotheses 2 and 3. In case of self-determination in the organizational context, slopes for family support are significant (unstandardized β = 0.263 at p ≤ 0.05 and 0.511 at p ≤ 0.01) if superior support is low, thus corroborating hypothesis 4. All slopes for family support are significant in case of control in non-work domain so substitute effect cannot be established here (see Table 3). Figure 1.1 shows the graphical representation of the effect of family support on the meaning dimension of empowerment at low and high colleague support. Figure 1.2 shows similar graphs for effect of family support on meaning at low and high superior's support and Figure 1.3 is for effect of colleague support on meaning at low and high superior's support. Figures 2.1 to 2.3, 3.1 to 3.3, 4.1 to 4.3, 5.1 to 5.3, and 6.1 to 6.3 are similar representations for the remaining five dimensions. Figures 1.4 to 6.4 give graphical representation of the effect of family support on each dimension of psychological empowerment for all four instances – colleague and superior supports both low, colleague
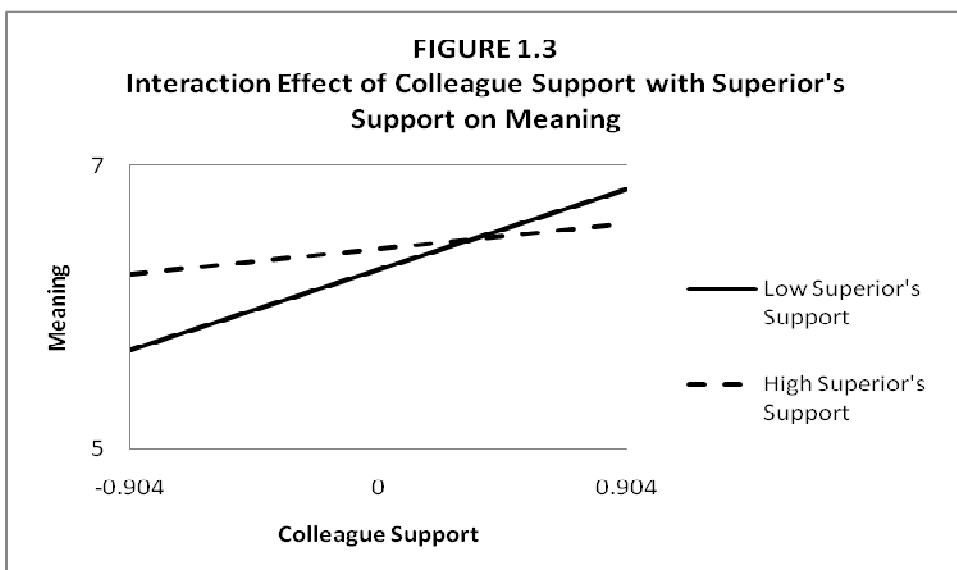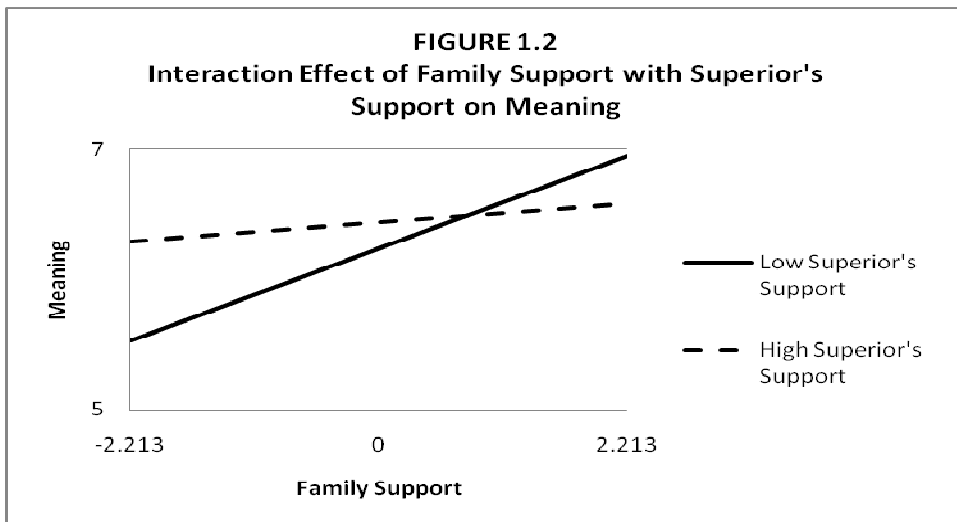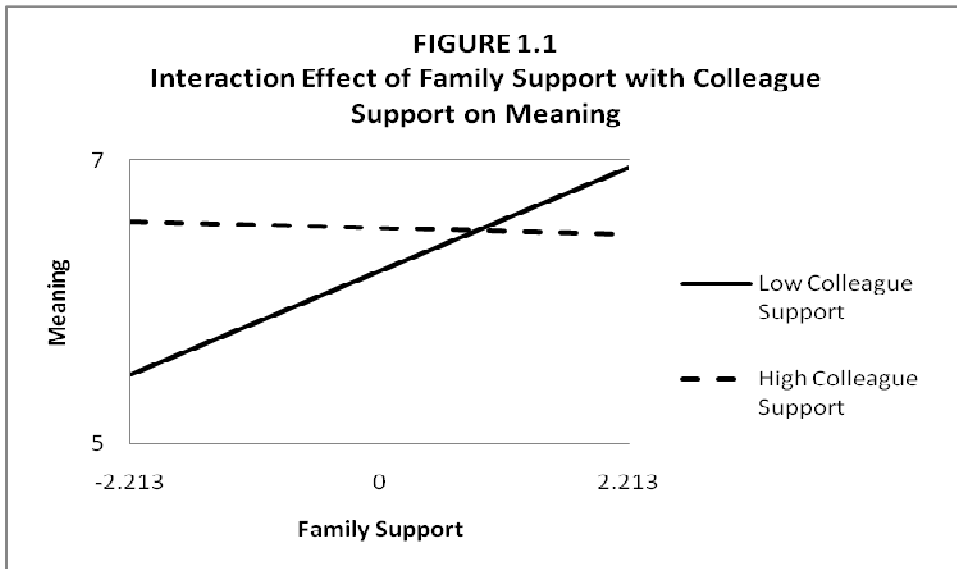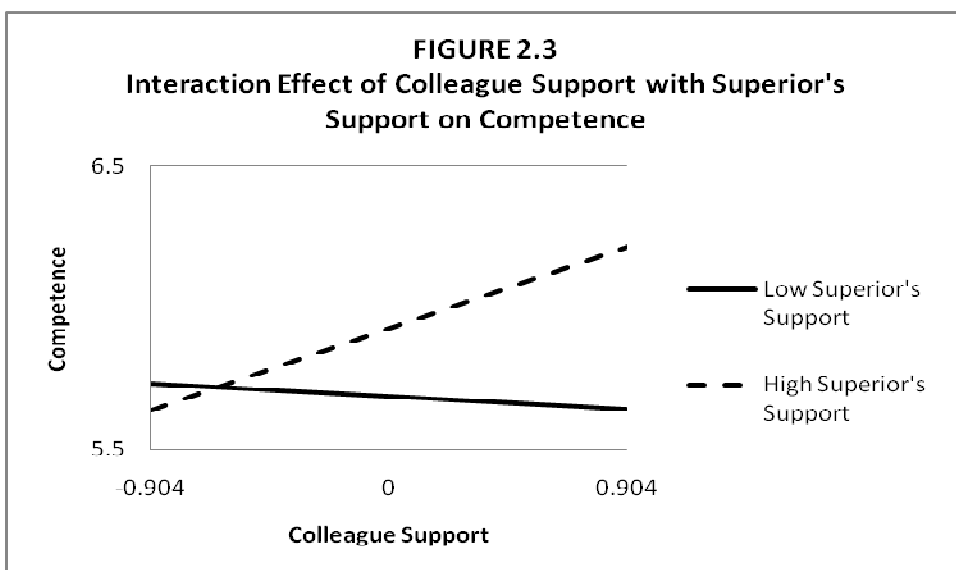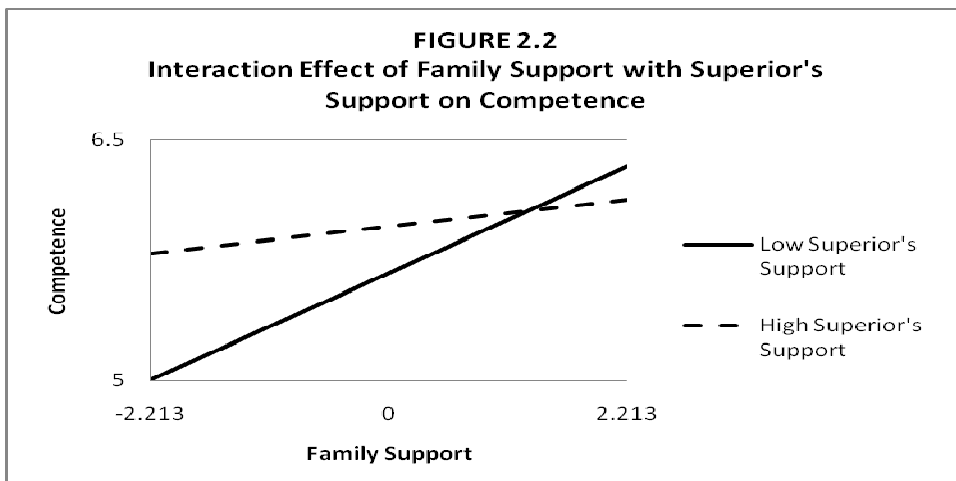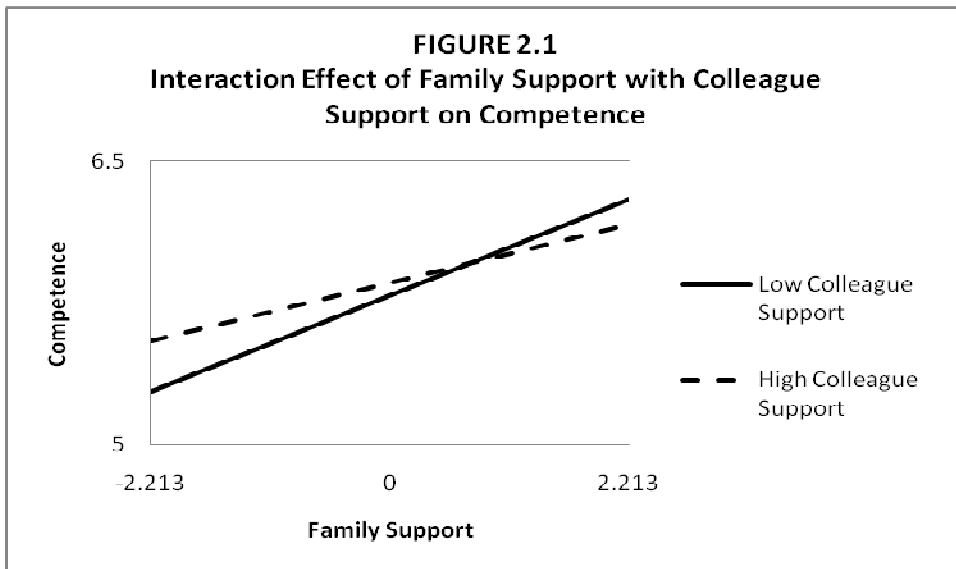
support low and superior support high, colleague support high and superior support low, and colleague and superior supports both high.
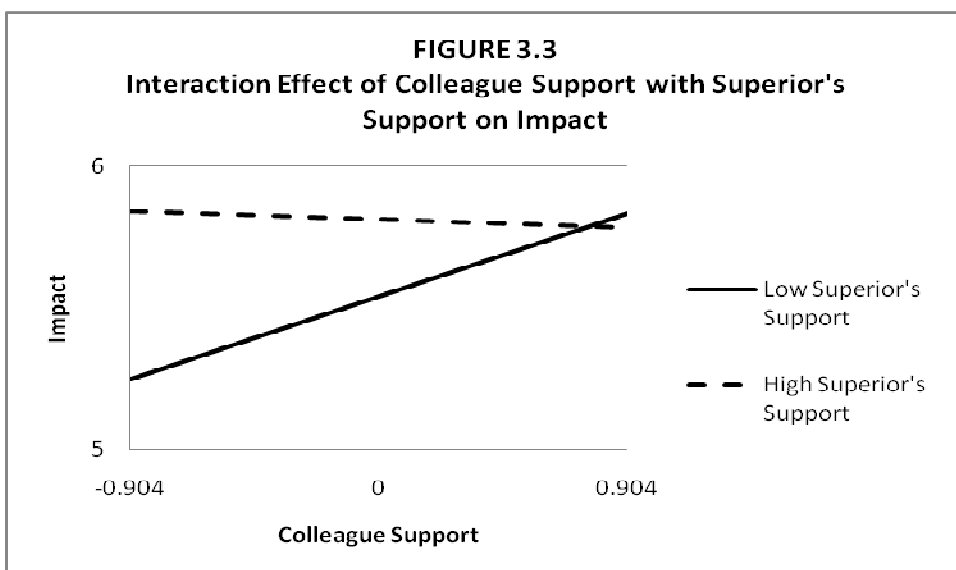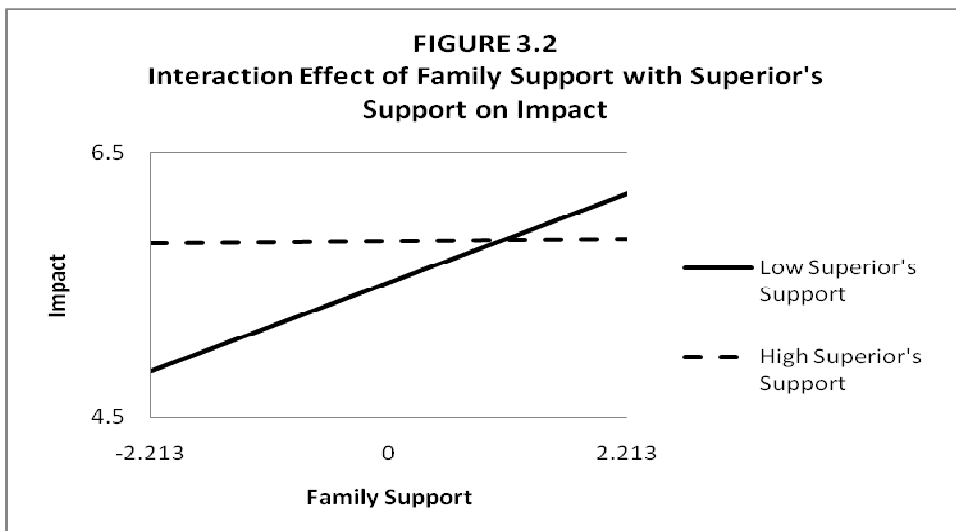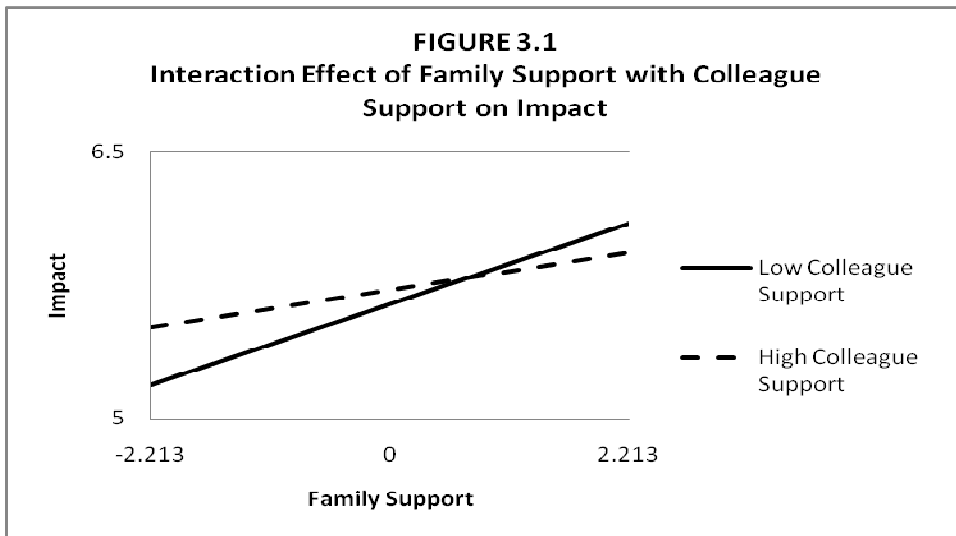
Table 3: Simple Regression Lines of the Effect of Family Support on Dimensions of Empowerment at 2 Levels of Workplace Support

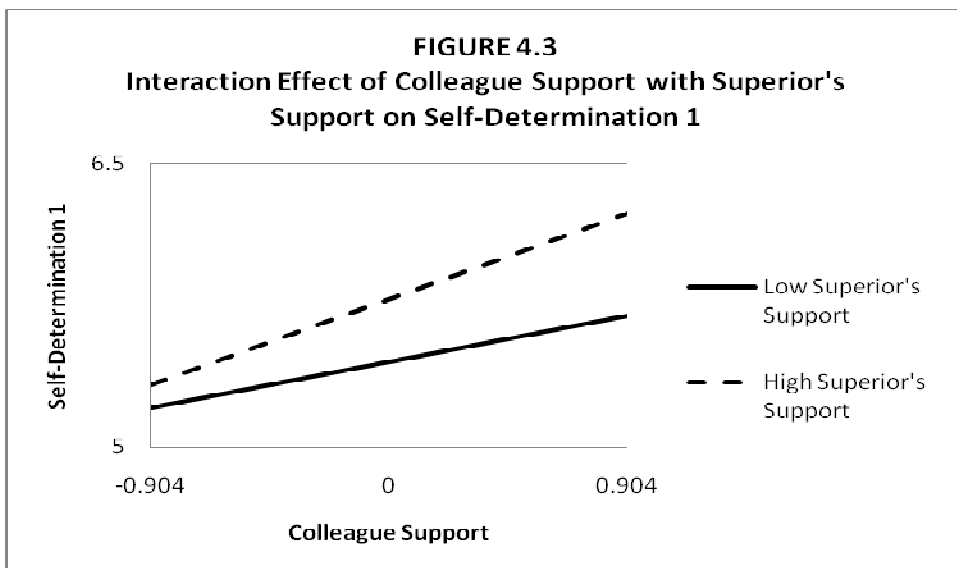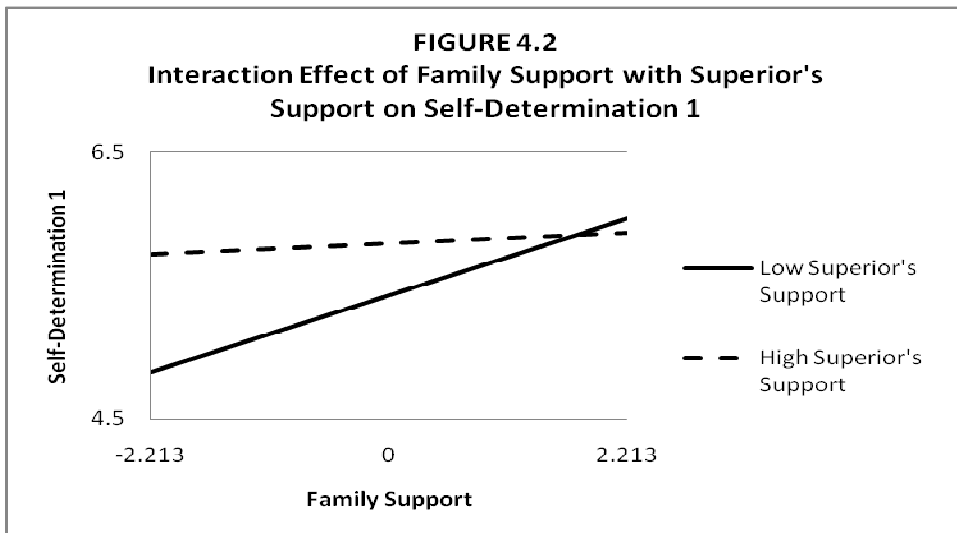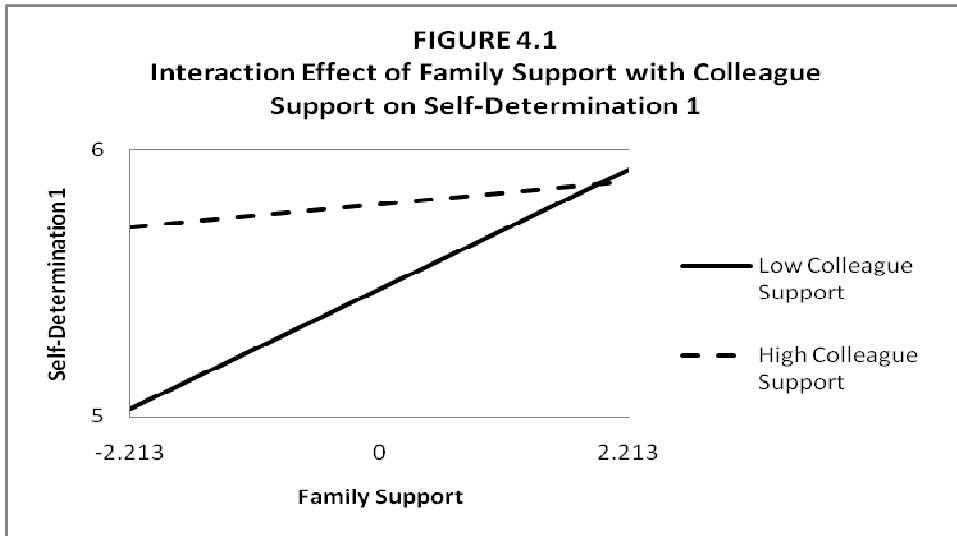| Dimension of Empowerment (Y)		Family Support (X)	
		Low Colleague Support	High Colleague Support
Meaning	Low Superior Support	$Y = 3.787 + 0.385^{***} X$	$Y = 6.811 - 0.050 X$
	High Superior Support	$Y = 5.528 + 0.129^{\dagger} X$	$Y = 6.161 + 0.057 X$
Competence	Low Superior Support	$Y = 3.628 + 0.359^{***} X$	$Y = 4.008 + 0.251^{*} X$
	High Superior Support	$Y = 5.735 + 0.009 X$	$Y = 5.429 + 0.107 X$
Impact	Low Superior Support	$Y = 3.637 + 0.303^{***} X$	$Y = 4.231 + 0.220^{\dagger} X$
	High Superior Support	$Y = 6.242 - 0.067 X$	$Y = 5.279 + 0.086 X$
Job Level Self-Determination	Low Superior Support	$Y = 3.506 + 0.318^{***} X$	$Y = 5.422 + 0.016 X$
	High Superior Support	$Y = 6.025 - 0.076 X$	$Y = 5.228 + 0.125 X$
Organization Level Self-Determination	Low Superior Support	$Y = 2.185 + 0.263^{*} X$	$Y = 0.510 + 0.511^{**} X$
	High Superior Support	$Y = 3.964 - 0.071 X$	$Y = 3.535 + 0.125 X$
Non-Work Domain Control	Low Superior Support	$Y = 2.340 + 0.484^{***} X$	$Y = 3.194 + 0.434^{***} X$
	High Superior Support	$Y = 3.441 + 0.352^{***} X$	$Y = 1.780 + 0.632^{***} X$

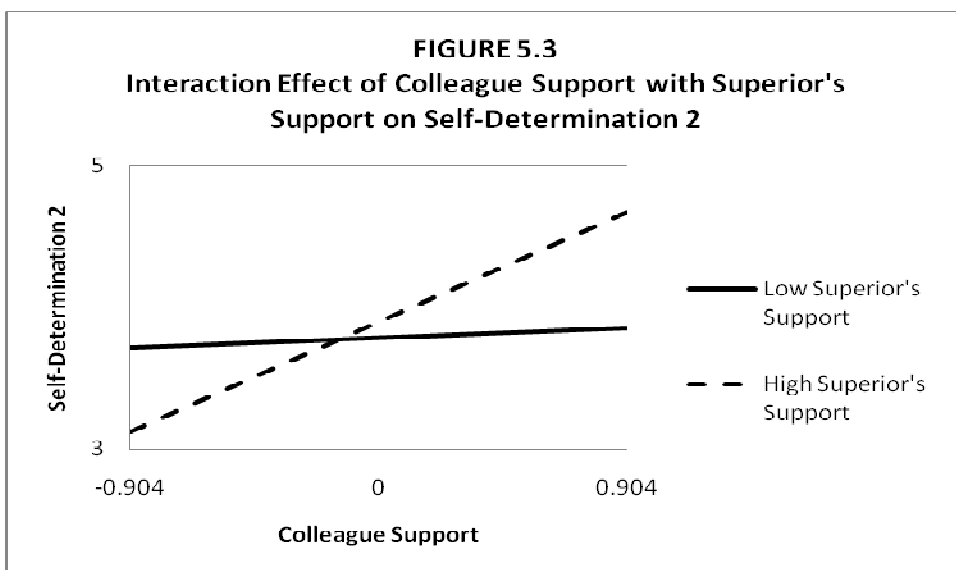*** $p \leq 0.001$; ** $p \leq 0.01$; * $p \leq 0.05$; † $p \leq 0.10$; two-tailed tests.

FIGURE 1.1
Interaction Effect of Family Support with Colleague Support on Meaning

FIGURE 1.2
Interaction Effect of Family Support with Superior's Support on Meaning

FIGURE 1.3
Interaction Effect of Colleague Support with Superior's Support on Meaning

FIGURE 2.1
Interaction Effect of Family Support with Colleague Support on Competence

FIGURE 2.2
Interaction Effect of Family Support with Superior's Support on Competence

FIGURE 2.3
Interaction Effect of Colleague Support with Superior's Support on Competence

FIGURE 3.1
Interaction Effect of Family Support with Colleague Support on Impact

FIGURE 3.2
Interaction Effect of Family Support with Superior's Support on Impact

FIGURE 3.3
Interaction Effect of Colleague Support with Superior's Support on Impact

FIGURE 4.1
Interaction Effect of Family Support with Colleague Support on Self-Determination 1

FIGURE 4.2
Interaction Effect of Family Support with Superior's Support on Self-Determination 1

FIGURE 4.3
Interaction Effect of Colleague Support with Superior's Support on Self-Determination 1

FIGURE 5.1
Interaction Effect of Family Support with Colleague Support on Self-Determination 2

FIGURE 5.2
Interaction Effect of Family Support with Superior's Support on Self-Determination 2

FIGURE 5.3
Interaction Effect of Colleague Support with Superior's Support on Self-Determination 2

FIGURE 6.1
Interaction Effect of Family Support with Colleague Support on Non-Work Domain Control

FIGURE 6.2
Interaction Effect of Family Support with Superior's Support on Non-Work Domain Control

FIGURE 6.3
Interaction Effect of Colleague Support with Superior's Support on Non-Work Domain Control

FIGURE 1.4
Interaction Effect of Family Support with Colleague and Superior's Support on Meaning

FIGURE 2.4
Interaction Effect of Family Support with Colleague and Superior's Support on Competence

FIGURE 3.4
Interaction Effect of Family Support with Colleague and Superior's Support on Impact

FIGURE 4.4
Interaction Effect of Family Support with Colleague and Superior's Support on Self-Determination 1

FIGURE 5.4
Interaction Effect of Family Support with Colleague and Superior's Support on Self-Determination 2

FIGURE 6.4
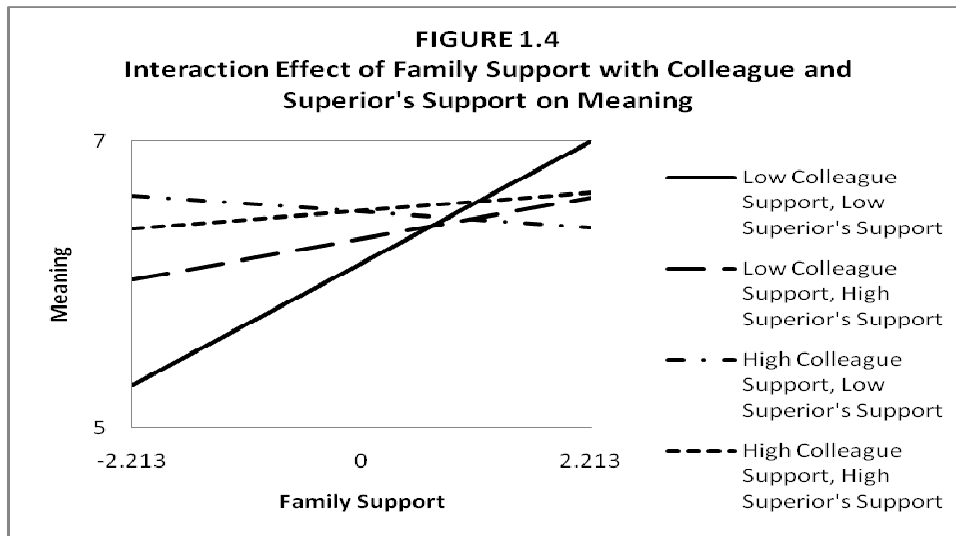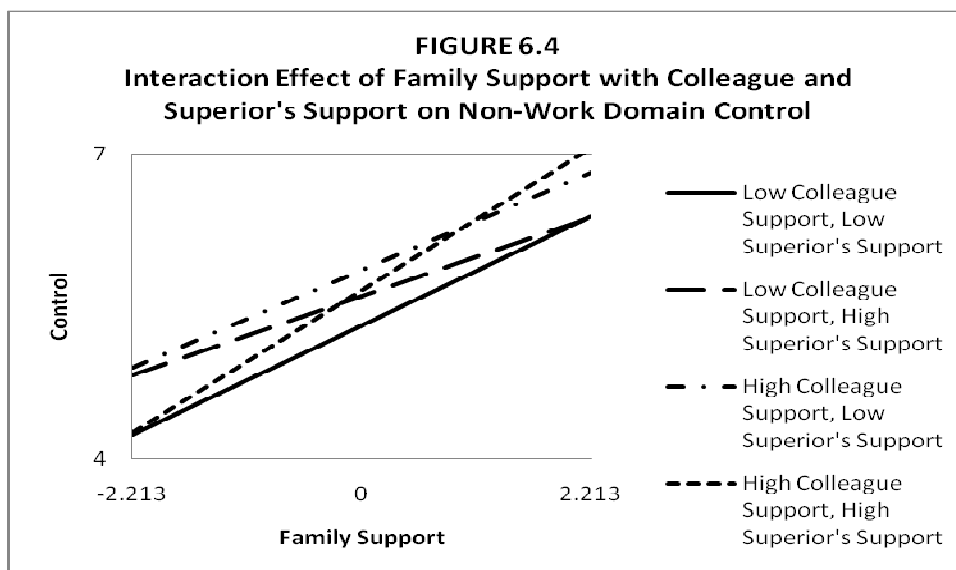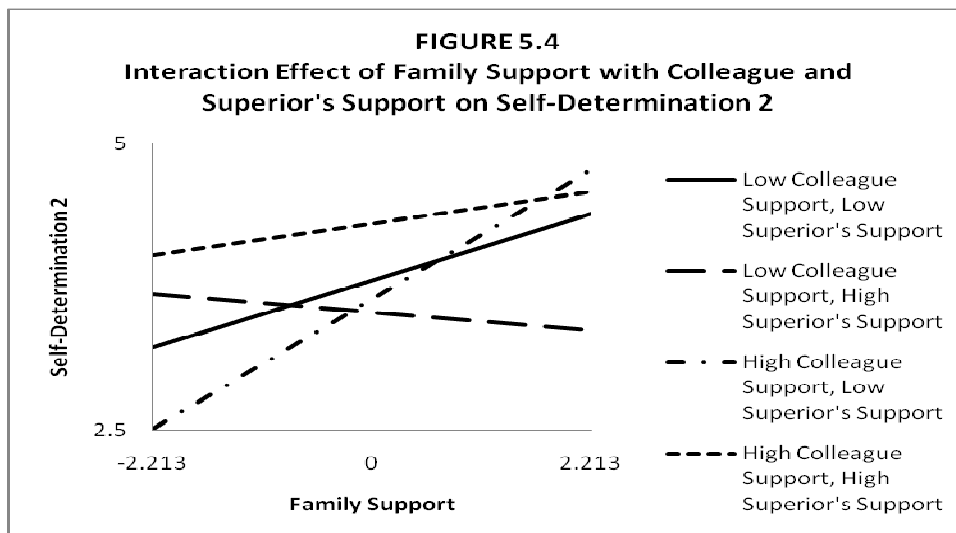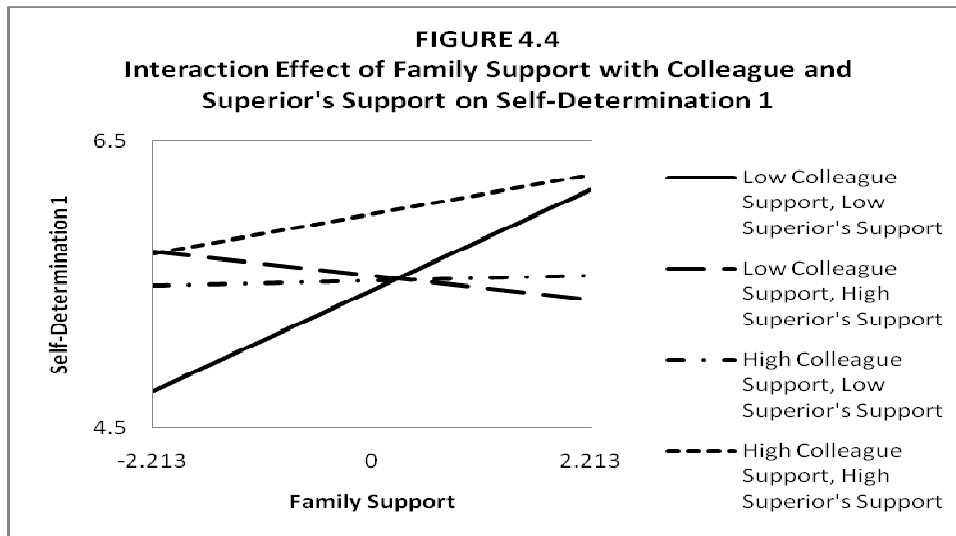### Interaction Effect of Family Support with Colleague and Superior's Support on Non-Work Domain Control

Complementary Effect. The complementary effect between colleague and superior's supports is seen in case of competence ($\beta = 0.137$ at $p \leq 0.01$ in model 4 of Table 2) and organization level self-determination ($\beta = 0.125$ at $p \leq 0.05$ in model 10). This means that in presence of greater support provided by the superior, employees perceive more competence to do their work and for self-determination in the organizational context if given more support by their colleagues. Thus hypothesis 4 is partially supported. This complementary effect does not hold for meaning, impact, and job level self-determination. In case of control in non-work domain there is evidence of substitute effect rather than complementary effect. This support is contrary to hypothesis 4. Results imply that in case of low support provided by the superior, greater control in non-work domain can be perceived by stronger colleague support.

Three-Way Interaction Effect. Hypothesis 5 is supported for meaning ($\beta = 0.133$), job level self-determination ($\beta = 0.122$), and non-work domain control ($\beta = 0.092$) at $p \leq 0.05$. This implies that if support from all three groups is high then employees perceive more meaning in their work, greater self-determination in the job context, and better control in non-work domain. Three-way interaction effect is not substantiated for competence, impact, and organization level self-determination (see Table 2).

<div align="center">

Discussion

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Despite researchers (Gonzalez & Griffin, 1997; Rusbult & Arriaga, 1997) suggesting that individuals' attitudes, beliefs and dispositions are influenced through long-term relationship, there is hardly any study which has taken into account how each individual dimension of empowerment is being affected by each individual social support system and the possibility of complementarity or substitutability of the support sources. We have

considered broader sources of social support network comprising family, colleague, and superior (Fenlason & Beehr, 1994).

The study supports earlier researchers' perspective that family is an important source of support in an individual's social support network (Wallen, 2002; de Janasz et al., 2003). We found employees perceive greater meaning in their work if they sense more support of their family. Similarly we found colleague support is significantly related to meaning dimension of empowerment, thus adding to the work done by Corsun & Enz (1999) on colleague support. We did not find evidence for superior's support enhancing perceived meaningfulness of the work. One of the reasons for this finding might be the value alignment of individuals is essentially intrinsic and it cannot be dictated or influenced by superiors. However this alignment might be influenced by those (family and colleagues) who share close intimacy in their day-to-day dealings with the individual. This is an interesting area which requires further in-depth study.

Competence and impact were significantly affected by family and superior supports. Surprisingly we did not find support for employees perceiving greater competence or impact in their work if their colleagues provide more support. This is contrary to the findings of Corsun & Enz (1999) who found peer helping is significantly related to influence and self-efficacy dimensions of empowerment. Also, earlier Xanthopulou, Baker, Heauven, Demerouti & Schaufeli (2008) found for flight attendants colleagues' support affect self-efficacy of employees. One possible explanation for not finding colleague support affecting competence might be derived from the nature of the primary school teachers' engagement in India (Kingdon, 2007). In the primary schools of India the general qualification of teachers is low (Kaushik et al., 2009). Since hierarchically colleagues are placed in the same level, colleagues' support on either competence or impact dimension is

unlikely to make much difference. Clearly this is an interesting area which calls for further research.

Self determination at job level is one dimension of psychological empowerment that is influenced by support from all three groups, family, colleagues, and superior. Employees perceive more self-determination in their organizational context if they sense more support of their family and are provided more support by their colleagues. A surprising result is that the support provided by their superior did not enhance employees' organizational level self-determination. We believe that organizational level self determination may require individuals to challenge certain policy level issues and the implementing authority. In such scenarios support from family and colleagues is very important.

Control in non-work domain was significantly affected by family and colleague support. This is an important finding since it shows how colleague support, an important job resource (Xanthopoulu et al., 2008) residing in work domain can spillover to non-work domain of an individual. This supports the earlier researchers (Kinnuen & Mauno, 1998; Newman & Mathews, 1999; Wadsworth & Owens, 2007) perspective on the interaction of work and non-work domains. However, our hypothesis of employees perceiving greater control in non-work domain if their superior provides more support was not substantiated by the results of our study. One possible explanation might be that since frequency of interactions amongst colleagues is more (Goldthorpe et. al., 1968), individuals are likely to consider their colleagues closer confidante than superiors. Another reason for this finding might be that in Indian society power-distance between superiors and subordinates is large (Hofstede, 1979). Hence the hierarchical distance might restrict superiors' support to organizational context only and cannot be spilled over on the non-work control domain. This would be another interesting area for further exploration.

As hypothesized we found there is a strong substitute effect between family and colleague supports in the meaning dimension of empowerment. Individuals find their work meaningful when they sense more support of their family in case colleagues support is low. We also found certain evidence for substitute effect between family and superior's support on the dimensions of competence, impact and self-determination in organizational context. These findings clearly establish two important aspects, first, how different sources of supports located in two different domains can compensate for each other, essentially based on Compensation Theory (Faunce and Dublin, 1975) , and second, the importance of family support in an employee's social support network (Wallen, 2002; de Janasz et al., 2003).

In case of competence and organization level self-determination, we found complementary effect between colleague and superior's supports. Employees perceive more competence and self-determination in the organizational context when provided support by the superior along with colleagues' support. This findings support the importance of closer association between co-workers (Shadur et al., 1999; Berman et al., 2002) and superiors (Koestner et al., 1984; Deci et al., 1994) who together create supportive organizational climate to nurture individual's skill and encourage individual to exercise authority in organizational policy level issues.

Interestingly, in case of control in non-work domain there is evidence of substitute effect rather than complementary effect, which is contrary to our hypothesis. Results indicate that in case of low support provided by the superior, greater control in non-work domain can be perceived by stronger colleague support. Colleagues being providers of three critical supports, professional support (in terms of information sharing, advice, sharing of common issues of concern, feedback etc.), structural support (in terms of team-planning and maintaining colleague discipline), and moral support (in terms of empathy, care,

understanding, and mutual awareness of others' needs) (Rogers, 2006) constitute a critical source of support in an individual's social support network. In monotonous repetitive jobs social exchange amongst colleagues might involve sharing jokes, teasing each other (Roy, 1959), giving advice, and providing information and help. The effect of these exchanges can easily transcend organizational work boundaries and help individuals to gain more control in the non-work domain.

The study also demonstrates that when supports from all the three groups are high then employees perceive more meaning in their work, greater self-determination in the job context, and better control in non-work domain. Overall the finding supports that empowerment is related to teamwork, collaborative spirit, and relationship based on trust and mutual sharing (Coleman, 1996; Sheer, 1996).

There are two important policy implications of this study. First, there is need for ensuring that family support flow from non-work domain through various family-supportive programmes. Second, responsibility to be taken by those in decision making positions in organizations to help promote a supportive organizational climate through promotion of teamwork, trust, mutual respect, and understanding amongst the organizational members.

Conclusion

The study establishes the importance of social support from both work and non-work domain for empowering employees. We examined the interactions among the effect of social support provided to an individual by three groups, viz., family, colleagues, and superior, on each dimension of psychological empowerment. Findings of the study gave critical insights on complementarity and substitutability of social support systems for enhancing individual dimensions of empowerment. Employees having low colleague support would need stronger family support for perceiving greater meaningfulness in the

work. Similarly, employees' having low superior's support need more family support for having better opinion of their competence, more impact in the workplace, and higher level of self-determination in organizational context. We found employees having support from superior perceive more competence to do their work and greater self-determination in the organizational context if given more support by their colleagues. Interestingly, there is evidence of substitute effect rather than complementary effect for control in non-work domain. The study also shows that overall supportive and congenial work and family environment help employees to perceive more meaning in their work, greater self-determination in the job context, and better control in non-work domain. This is a cross sectional study of women primary school teachers in India. Longitudinal study of more occupational groups across gender would give more insights on the postulations made in this study. Further research on linkages of individual dimensions of empowerment with social support system would enrich empowerment literature for both academicians and practitioners.

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