The International Journal of
INDIAN PSYCHOLOGY

A Study of Occupational Self Efficacy among Traditional and Telecommuting Workers

Dr. Roshan Lal[1]*, Dr Ritu Sekhri[2]

ABSTRACT

The present study aimed at equating a comparison of workers who work with a traditional work setting and that of telecommuting professionals residing in Chandigarh, India on the premises of Occupational self-efficacy(OSE) and its factors. The hypothesis used is a null hypothesis stating that there will be no significant difference observed in occupational self-efficacy between telecommuting workers and those pursuing a traditional work setting but the results verify the need and effectiveness of traditional work schedules compared to telecommuting.

For the purpose of the current study, OSE Scale, developed in the year 2005 by Sanjyot Pethe, Sushama Chaudhary, and Upinder Dhar was used. The respondents were sent he questionnaire by electronic-mail. A sample of 60 employed personnel was taken and a non probability sampling technique of snowballing was used out of which 30 employees were from the traditional work setting while 30 were telecommuting. A correlational research design was employed and for the purpose of analysis of results, an independent sample t-test was used.

Results were subjected to Shaipro-Wilk test for normality, following which independent sample t-test and Mann Whitney U test were used to test the formulated hypotheses. The employees who adhered to the traditional work setting scored relatively higher in occupational self efficacy and its several parameters like individuality and positive attitude. However there was no particular difference on adaptability, command, confidence, and personal effectiveness factors was observed in the two groups.

Keywords: occupational self efficacy (OSE), telecommuting, traditional work setting

With the technology advancement and technical growth, the information technology has led to brand new and flexible occupational designs like working from home, tele-working, or e-work practice. With the fast paced advancement, expanding business to remote areas has become inexpensive and convenient (Belanger, 1999). There many differences and no consensus in understanding the expression "telecommuting." Cooper (1996), found that electronic media is the main communication channel between the organization and the home from where work is

[1] Asst. Professor of Psychology, Panjab University, Chandigarh, India
[2] Asst professor of psychology, PGGCG , sector-11, Chandigarh, India
*Corresponding Author

carried out (as cited in Cooper, & Kurland, 2002). Telecommuters structure their personal life around professional commitments easily. And this has gained immense impetus during the pandemic owing to a wide range of impact on family structures and settings.

TYPES OF WORK SCHEDULES

Compressed Work Week. This type of scheduling refers to the work design where a tradition 40 hrs and five days week is compressed in a 4-40 design. A 4-40 design implies that the 40 hour of work requirement per week of the employees will now be accomplished in four days instead of five wherein employees will work for 10 hours instead of eight per day and the consequences being that employees can avail three continuous days off from work.

Flexible working Hours (Flexitime). Flexitime schedule as the name implies is one which gives the choice of timing to the employee on a daily basis to select between the work and non work activities. The companies usually have certain core hours wherein it is a mandate for the employees to work, but apart from the core hours, they are free to select the work and non work hours as long as they fulfil the daily requirement of the number of hours to be accomplished each day at work.

Job sharing. It is a work design where a single job is split between two people. Based on mutual agreement and the agreement with the employer, these employees can share the job where one person works for the first half of the day and the second person for the next half.

Part time work. It is a controversial work design that traditionally employs temporary worker who are required to work for less than 40 hours per week. These workers are employed as and when the need arises. They are easy to hire as well as release. It is estimated the out of all part time workers, 70% of them are females.

Teleworking. With advancement of technology and owing to the pandemic, work from home has become the order of the day. Employees are increasingly using personal computers and internet enabled phones to complete the official projects and transmit letters and data to their employers.

THE TELECOMMUTING

The term initially used for telecommuting was telework. But telework was a broader term used to denote work away from office using the equipments for telecommunication. This mode of work was seen in as early as 1950. With the advent of personal computers, the term 'Telecommuting' was used officially in 1973 to lay emphasis on a work design that enabled people to work from home as an alternative to commuting to office everyday of their lives. Such a design came into being mainly because many companies were concerned about fuel shortage that arose during the 1970s due to the OPEC oil crisis. Later in the 1990s, the companies turned more humanistic and also accommodated such designs because of employees' personal requirements. Especially women were eased with the facilities enabling them to continue to work while taking care of infants or toddlers.

In the recent years, telecommuting has become even more flexible with smartphones that enable people fulfil their office duties from anywhere. (Hill, Hawkins & Miller, 1996, p.293).

ADVANTAGES AND DISADVANTAGES OF TELECOMMUTING

Organisations have had enormous advantages like expanding applicant pools while employee benefit from the time saved in commuting and ecologically it helps in reducing the pollution and contributing to a greener environment. The International Telework Association and Council (ITAC) released a study recently which concluded that telecommuting as the new work design has the potential to save the employers money and also provide increased flexibility to workers which in turn may lead to improved productivity usually at par with their colleagues in the traditional work design. It helps the employees to better plan their official and personal endeavours and work accordingly, thereby providing a source to boost their morale and decrease the stress. Moreover the study revealed that employees usually find this work design to be an employment incentive to them which steadily improves their performance. This also helps the company to set in their retention plans and become an attractive choice for the potential employees in the market.

For employees it provides added flexibility to spend additional hours at home each day and manage their personal activities which in turn increases their satisfaction. It also helps to accommodate people with disabilities and remove unnecessary barriers (Rao, 2010, pp. 355).
Telecommuting is not just studied in conjunction with occupational self efficacy but also with factors directly/indirectly affecting the same. In 1996, Hill *et al.,* provided evidence from empirical studies that virtual office had a positive relationship with flexibility and productivity but however, it does not support the notion of work life balance. Alternatively, in 2002, Bailey and Kurland supported the view that benefit of work life balance is a result of telecommuting, as it helps dual career spouses to be more inclusive in family duties (as cited in Siha & Monroe, 2006, p. 455).

Studies by Mamaghani in 2012 have also indicated that employees feel motivated intrinsically to perform better when they find an opportunity to work according to their preferences and they perceive an increased sense of control over the work settings.

Telecommuting has advantages but it is not without disadvantages like the risk of employee isolation, lack of participation and commitment, low ownership and distractions (Cooper & Kurland, 2002). Employees may also find it difficult to work alone and may feel isolated from the office fun activities. Moreover, the managers also at times find it difficult to coordinate with varied team members across different locations. Certain clarifications also require people to talk face to face which is difficult to organise at short notices (Rao, 2010, pp. 353). According to Bandura (1994), more than the technical skills, it is the psychosocial factors and the personality traits that determine the success of a person's vocational endeavours.

WORKPLACE PERFORMANCE AND OCCUPATIONAL SELF EFFICACY

Mainly because of Bandura's contribution, self efficacy is widely studied in business research and therefore has now come to be known as occupational self efficacy. Schyns and Collani (2002) define occupational self-efficacy as "one's belief in one's own ability and competence to perform successfully and effectively in situations and across different tasks in a job." In 2003, Bandura and Locke concluded that occupational self efficacy is an influential determinant in job performance. It affects motivation and performance at workplace and in turn affects the family dynamics of the worker.

REVIEW OF LITERATURE

Occupational self efficacy and goal setting are also complimentary to each other. A meta analysis done by Locke and Latham in 2006, revealed that occupational self efficacy is higher when goals are relatively tougher.

Similarly, Pati and Kumar (2010) administered the Occupational Self Efficacy scale developed by Rigotti et al., in 2008 on a 200 software programmers and found that self efficacy is positive correlation to individual engagement.

Increase in autonomy also resulted in employees opting for newer work designs. Organizations are taking extra-ordinary measure to manage remote employees. In 1999, Staples, Hulland and Higgins built a model to assess telecommuters' self efficacy and behavioural consequences. Results indicated that the job effectiveness and occupational productivity are significantly influenced by telecommuters' self efficacy.

Telecommuting is the new pervasive work mode. With the ability to cope, the employees proactively accept changes, assume responsibility and develop positive attitude towards work and even at home. A survey research employing 723 participants involved in a telecommuting program of a formal organization indicated that work outcomes and occupational self efficacy are positively correlated. It further showed that employees who telecommute extensively have accentuated positive relationships (Raghuram, Wisenfeld, & Garud, 2003).

Yet another research in The United States, using data from the 1992 National Study of the Changing Workforce shows that this autonomy may not always increase the occupational self efficacy. The alternative/flexible work schedules negatively influence the work life balance and do not necessarily 'unbind' time. The result was found by analyzing the effects of alternative work schedule hours and the degree to which employees perceived job autonomy and work life balance. The employees' adaptability was poor leading to a low self efficacy and work life balance (Tausig & Fenwick, 2001).

Telecommuting as the new virtual work design has implications for the employees, the company and the society. It offers increased autonomy and flexibility to the individuals, while for the organisation; telecommuting helps build the human resource capacity and saves overhead costs. By saving in the infrastructure and energy consumption, reducing the damage to the environment and providing solutions for employees with special needs, telecommuting also contributes to the society. Yet on the other hand, the disadvantages seem to outweigh the advantages. Employees feel inept to separate work from home, sense of loneliness and isolation lowers productivity. Employees fail to identify with the organization resulting in lowered commitment. The cost involved in transition and training is also enormous. Thus the implications of replacing tradition work design with telecommuting are constantly being challenged (Harpaz, 2002).

RATIONALE

An increasing number of husbands also bear the burden of managing homes. With the advent of the flexible work designs, more and more number of employees are opting for 'work from home' instead of tradition work design of nine to five job. Telecommuting becomes specifically attractive to disabled employees or employees with dependant care issues. Companies investing

in telecommuting claim to have better productivity, decline in absenteeism and reduced cost for office overheads.

Also insufficient technical support contributes to its failure. Moreover all employees do not conform to the idea of 'work from home' because of the perception that they are "never free from work." Team based projects are also affected. Employees' need for recognition and need for social interaction remains unfulfilled. Their personal effectiveness and individuality is suppressed. All these factors indirectly affect the self efficacy of the employee working from home and in turn pull down the occupational efficiency of the employee (Shultz & Shultz, 2002). Such theories raise pressing questions of whether employees must opt for telecommuting or not and do the telecommuters always rank higher in occupational self efficacy from which the organisations could reap benefits.

It must be noticed here that all studies cited above which correlated occupational self efficacy positively with telecommuting and job effectiveness have been conducted in the 90's while there are hardly any studies in the past one decade that indicate a negative correlation between occupational self efficacy and telecommuting. The current pandemic that forces us to adapt to such work schedules and this incongruence of results over a period of time also provides the basis for research

Hypotheses
1. There is no significant difference in occupational self efficacy between employees in traditional work schedule and telecommuters.
2. There is no significant difference in confidence, command and adaptation among employees of traditional and telecommuters
3. There is no significant difference in personal effectiveness between employees in traditional work schedule and telecommuters
4. There is no significant difference in positive attitude and individuality among employees in traditional work schedule and telecommuters

METHODOLOGY
The aim of the current study was to investigate the differences in occupational self efficacy between employees in traditional work design and telecommuters. The researcher used a quantitative design to find out the same and the detail description of method is given in the following section.

Sample
The randomly selected sample included the employees from Information technology sector working in traditional work schedules as well as telecommuters from Chandigarh. A total sample size of 60 employees for each group has been selected for the study. Employees working in traditional work setting and telecommuters had equal representation of 30 each.

Tools used:
The Occupational Self Efficacy Scale (OSES). Pethe, Chaudhary, and Dhar (2005) used for the data collection. The scale has been standardised with respect to the Indian population using a sample of 220 subjects. The final scale has 19 items. It uses a five point Likert scale for the

purpose of scoring. The odd-even reliability coefficient of the scale is 0.98 . while the content validity is .99 (Pethe, Chaudhary & Dhar, 2005).

Statistical analysis
To test the hypotheses for the purpose of the study, first a Shapiro-Wilk normality test will be used for the varied factors and the total score because the sample size for each group is small. Accordingly, a Mann Whitney U test or an independent sample '*t*' test will be employed to test the significance of the difference in occupational self efficacy and its factors between the employees in traditional work schedule and telecommuters.

RESULTS

The current study was aimed at investigating the differences in "occupational self-efficacy" and its varied determinants between telecommuters and workers in traditional work design. A quantitative research design was used by the researcher and the data was initially analysed using Shaipro-Wilk test of normality, following which t-tests and Mann Whitney U tests were done. The tables for the same are presented below.

Table 1, Shaipro-Wilk test of normality for Occupational Self Efficacy and its factors

Variable	Work design	Shapiro-Wilk		
		W	*df*	Sig.
Confidence	Telecommuting	.96	30	.36
	Work from office	.97	30	.54
Command	Telecommuting	.96	30	.33
	Work from office	.96	30	.24
Adaptability	Telecommuting	.92	30	.03
	Work from office	.92	30	.02
Personal Effectiveness	Telecommuting	.95	30	.15
	Work from office	.96	30	.31
Positive Attitude	Telecommuting	.91	30	.01
	Work from office	.92	30	.03
Individuality	Telecommuting	.97	30	.53
	Work from office	.90	30	.01
Occupational self efficacy	Telecommuting	.80	30	.00
	Work from office	.94	30	.09

Results of table 1 show that Confidence (W = .96 & .97, p > .05), Command *(W = .96 & .96, p > .05)* and Personal effectiveness (W = .95 & .96, p > .05) are normally distributed whereas Adaptability (W = .92, p =.03; W = .93, p = .02), Positive Attitude (W = .91 , p = *.01; W* = .92, p = .03), Individuality (W = .97 , p > .05 ; W = . 90 , p = .01) and Occupational self efficacy (W = .80, p = .00; W = .94 , p > *.05*) are not normally distributed.

Based on the above results, variables which are found to be normally distributed were analysed using an independent sample t-test, whereas the variables which are not normally distributed were subjected to a Mann-Whitney U test analysis.

Table 2 - Descriptive statistics and 't' test for confidence in employees in different work designs

Variable	Group	N	Mean	SD	t	df	Sig.
Confidence	Work from home	30	16.03	2.07	.55	58	.58
	Work in office	30	16.33	2.12			

Results of Independent t test presented in table 2 indicate that the two groups of work design are not significantly different on the confidence factor (*t* (58) = .55, *p* > .05).

Thus, the hypothesis , *There is no significant difference in confidence between telecommuters and employees in traditional work schedule,"* is accepted.

Table 3 -Mann Whitney U test of adaptability with respect to work designs

Variable	Work design	N	Mean Rank	Sum of Ranks	Z	Sig.
Adaptability	Work from home	30	28.57	857.00	0.87	.38
	Work in office	30	32.43	973.00		
	Total	60				

Results indicate that there is no significant difference in adaptability of employees who work in office compared to telecommuters (*Z* = .87, *p* > .05).

Thus, the hypothesis, *"There is no significant difference in adaptability between telecommuters and employees in traditional work schedule",* is accepted.

Table 4 -Descriptive statistics and independent 't' test for personal effectiveness in employees in different work designs

Variable	Work design	N	Mean	SD	t	df	Sig.
Personal Effectiveness	Work from home	30	16.67	1.99	.19	58	.85
	Work in office	30	16.57	2.18			

Results of Independent t test presented in table 5 indicate that the two groups of work design are not significantly different on the factor of confidence (*t* (58) = .19, *p* > .05).

Thus, the hypothesis, *"There is no significant difference in personal effectiveness between telecommuters and employees in traditional work schedule,"* is accepted.

Table 5 -Mann Whitney U test of positive attitude with respect to work designs

Variable	Work design	N	Mean Rank	Sum of Ranks	Z	Sig.
Positive Attitude	Work from home	30	25.37	761.00	2.33	.02
	Work in office	30	35.63	1069.00		
	Total	60				

Results presented in table 6, indicate that employees who work in office are higher in positive attitude compared to telecommuters ($Z = 2.33$, $p = .02$).

Thus, the hypothesis, *"There is no significant difference in positive attitude between telecommuters and employees in traditional work schedule",* is rejected.

Table 6 - Mann Whitney U test of occupational self efficacy with respect to work work designs *designs*

Variable	Work design	N	Mean Rank	Sum of Ranks	Z	Sig
Occupational self efficacy	Work from home	30	24.97	749.00		
	Work in office	30	36.03	1081.00	2.460	.014
	Total	60				

Results presented in table 8, indicate that employees who work in office score higher on occupational self efficacy compared to the telecommuters ($Z = 2.460$, $p = .014$).

Thus, the hypothesis, *"There is no significant difference in occupational self efficacy between telecommuters and employees in traditional work schedule",* is rejected.

DISCUSSION

The current study was conducted by the researcher to compare the occupational self-efficacy between telecommuters and employees in traditional work designs. With the increasing trend of flexible work schedules, only limited research is available in this area to empirically prove the effectiveness of such schedules. Even, in this age, where much importance is given by the corporate to human capital and its freedom to select its work environment and pace, there is an example of a corporate giant that discontinued its practice of telecommuting and mandated the employees to work in office premises.

Thus, with new theories coming up in lack of empirical evidence, it was of prime interest to the researcher to assess the effectiveness of these two work designs of daily interactions in office and telecommuting and compare the two on the factor of occupational self efficacy in employees and its sub-factors of ,adaptability, personal effectiveness, confidence, command, positive attitude and individuality. Organisations that have adopted the practice of telecommuting have claimed to have increased productivity, sharp decline in reduced cost for office overheads and non-attendance rates (Shultz & Shultz, 2002). However, the statistics show otherwise.

The results from the research show that the employees from traditional work schedule and telecommuters do not differ on the confidence factor. The statement means that both the groups have similar levels of confidence in relation to their occupations. These results can be explained under the light that the work schedules of telecommuting as well as traditional nine to five jobs allow employees and also make them capable to work independently while making a significant impact on others. The premise behind the confidence of employees in different work schedules is that every individual employee, from his own unique perception is aware of how his organisation is faring. The confidence of employees is most often linked to the business metrics of the organisation (Herman, 2009). The difference in work design does not affect their ability to work under the pressure of deadlines and both groups have equal abilities of making significant

decisions. The telecommuters and the employees in traditional work design do not reflect differences in depending on their own abilities (Pethe, Chaudhary & Dhar, 2005).

Since there is no difference in the two groups on the factor of confidence, and the advantages of having a confident workforce are illustrated in the previous paragraph, the organisations must try to leverage their confident employees while striving to boost the same in other employees. Irrespective of the work designs trainings can be offered to all employees. With the advent of technology, virtual training platforms are accessible to employees working at different work stations. As a consequence, the employees' confidence can be improved by improving the way in which the company conducts its business (Park, 2004).

The results of the study also indicate that employees in traditional work design and the employees who telecommute show no significant difference in command. The results indicate that the employees in the two work designs, i.e., telecommuting and traditional work schedule do not differ on their sense of control over situations. In 2001, McCready, Lockhant and Sieyes suggested that by developing trust in teleworkers and remote working office places, employees can manage over-controlling and therefore avoid adverse consequences (as cited in Park, 2004).
It allows the employees from both work designs to handle any unforeseen situation at work or related to work. Their sense of control also enables them to develop resources to achieve their goals in the organisation, while honing their skills as and when needed to achieve a target (Pethe, Chaudhary & Dhar, 2005).

Both groups have their sets of challenges and the results thus nullify to make them almost similar in their abilities to adjust. The work designs do not play a significant role in their adaptability or the evaluation of their strategies, nor does it pose as a threat or a challenge that hinders employees' work. The adaptable employees whether they work from home or from office are able to handle anything that comes their way (Pethe, Chaudhary & Dhar, 2005).

George and Jayan (2012) said that adaptability is a significant dimension of personal effectiveness. They also pointed out that the organisational culture is an indicator of personal effectiveness. Employees scoring high on organisational culture are also high on personal effectiveness.

The correlation between the two indicates towards the result in focus in the current study. Since both the groups scored approximately the same on adaptability and belong to similar industry and work cultures, they show no signs of significant difference between personal effectiveness. The groups do not differ on the factor like personal growth, personal focus, customer focus, relationship and adaptability.

The difference in the attitude between the two groups can be attributed to a number of factors. Telecommuters are prone to lowering their positive attitude or developing a negative attitude towards the company because of the nature of job, the infrastructure provided for telecommuting, awareness of the statutory considerations, poor monitoring and measurement of performance and also because of employee isolation, lack of social interaction and lost communication (Manochehri & Pinkerton, 2003).

Employees with negative attitudes are more likely to be disengaged from work. The fulfilment of their task would be with the lowest quality work. This disconnection is a hefty cost for the company because an employee in traditional work schedule with similar competencies will be much more productive for the organisation.

If the companies after weighing their options plan to continue with telecommuting as a work design, special attention is needed to ensure that employees cultivate a positive attitude. Telecommuters with a positive attitude can become the company's competitive advantage because the employees will be as flexible, adaptable and satisfied as those working in the office while the telecommuting work design will also provide the society with benefits like reduction in pollution, increased familial and societal support (Manochehri & Pinkerton, 2003).

The results further indicate that telecommuters and the employees in traditional work schedule have significant difference in their individuality. The results reveal that employees who work in office are higher in individuality compared to telecommuters. Employees going to office regularly, thus, are independent in making decisions and setting standards for performance.

High individuality in employees who commute to office on a routine basis can thus be attributed to the availability of opportunities where they can show initiatives. Employees who work in the organisational premises are often facilitated by their social interactions to change their employers to maximise their compensation and find better working conditions. Thus, employees in traditional work schedule may have higher individuality by their belief in them as free agents, open to change and having autonomy in corporate matters (Lamont, 2001).

The above mentioned six factors in the discussion together yield the score for occupational self efficacy. The results of the research indicated that the employees in traditional work schedules and telecommuters differ significantly in occupational self efficacy. The scores reflect that employees in traditional work schedules have significantly higher self efficacy compared to the telecommuters. From the results, it can be inferred that employees who work in organisational premises on a routine basis have more confidence in their own ability and competence as compared to the telecommuters to perform effectively and successfully across different tasks in a job ad across different situations (Schyns & Collani, 2002).

Moreover, the impact of vicarious learning on employees' occupational self efficacy also depends upon factor like attractiveness of the model. When employees in their work environment observe a competent, effective and a successful model, the chances of such behaviour imitation by the observer is high. Infact organisations use modelling as a tool to increase the organisational and individual goal achievement in employees (Manz & Sims, 1981).

Such constant motivation and verbal persuasion is only feasible with routine interactions. The lowered self efficacy in telecommuters points out the lack of personal contact and constant conviction that the managers are able to provide the employees in traditional work design with.

Also, employees with high occupational self efficacy are more motivated and performance driven at workplace, since their high self efficacy leads them to be confident of their success (Tannenbaum et al., 1991).

The results from the current study reflect that employees working in traditional work schedules are higher in occupational self efficacy and thus, are more productive. Yet at the same time, telecommuters and regular employees show no significant difference in confidence, command, adaptability and personal effectiveness. It is thus, upto the organisations to understand the feasibility of any work design in relation to these factors. Independent researches must be taken up to individually assess each of the aforementioned factors and its impact on organisational productivity and efficiency. A cost benefit ratio must be drawn to find out the best practice for each organisation.

REFERENCES

Axtell, C. M., & Parker, S. K. (2003). Promoting role breadth self-efficacy through involvement, work redesign and training. *Human Relations*, *56*(1), 113-131. doi:10.1177/0018726 703056001452

Bandura, A., & Locke, E. A. (2003). Negative self-efficacy and goal effects revisited. *Journal of Applied Psychology*, *88*(1), 87-99. doi:10.1037/0021- 9010.88.

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, *84*(2), 191-215. doi:10.1037/0033-295X.84.2.191

Bandura, A. (1994). Self efficacy. In V.S. Ramachaudran (Ed.), *Encyclopedia of human behaviour* (Vol. 4, pp. 71-73), New York: Academic Press. (Reprinted in H. Friedman [Ed.], *Encyclopedia of mentall health,* San Diego:Academic Press, 1998)

Belanger, F. (1999). Workers' propensity to telecommute: An empirical study. *Information & Management*, *35*(3), 139-153. Retrieved from http://dx.doi.org/10.1016/S0378-7206(98)00091-3

Choi, W., Hecht, G., Tafkov, I., & Towry, K.L., Monkey see, monkey do? Vicarious learning under implicit contracts (2013, June 1). Retrieved from http://dx.doi.org/10.2139/ssrn.2293 142

Cooper, C. D., & Kurland, N. B. (2002). Telecommuting, professional isolation, and employee development in public and private organizations. *Journal of Organizational Behavior*, *23*, 511-532. doi:10.1002/job.145

George, R., & Jayan, C. (2012, June). The impact of organizational culture on personal effectiveness. *Journal of the Indian Academy of Applied Psychology*, *39*, 119-129.

Hafsteinsson, L. G. (2002, Februry,28). *The interacting effect of self-efficacy and performance goal orientation on goal setting and performance: The positive side of performance goal orientation* (Master's thesis). Retrieved November 28, 2013, from http://schola r.lib.vt.edu/theses/available/etd-03242002-221743/unrestricted/ETDMastersThesis.pdf

Harpaz, I. (2002). Advantages and disadvantages of telecommuting for the individual, organization and society. *Work Study*, *51*(2), 74-80. doi:10.1108/00438020210418791

Heibel, C. (2007, December 11). *The Benefits of Telecommuting*. Retrieved September 20, 2013, from TMC Net.com: http://technews.tmcnet.com/channels/call-center-software/articles/1 6330-benefits-telecommuting.htm

Herman, A. E. (2009). An overview of employee confidence. In *Kenexa*. Retrieved November 25, 2013, from http://www.kenexa.com/getattachment/a2b7ba27-32c7-4bab-82ca-c26c7 8d4eb7b/An-Overview-of-Employee-Confidence.aspx

Lamont, M. (2001, Jan 02). Craving individuality in the global village. *The Christian Science Monitor*. Retrieved from http://search.proquest.com/docview/405659084?accountid=38885

Leonard, B. (2000). Telework has many advantages. *HRMagazine, 45*(1), 23-24. Retrieved from http://search.proquest.com/docview/205267611?accountid=38885

Lunenburg, F. C. (2011). Self-efficacy in the workplace: Implications for motivation and performance. *International Journal of Management, Business, And Administration*, *14*(1), 1-5.

Mamaghani, F. (2012). Impact of telecommuting on organization productivity. *European Journal of Management*, *12*(3). Retrieved from http://www.freepatentsonline.com/article/European-Journal-Management/312171947.html

Margolis, H., & McCabe, P. P. (2006, March). Improving self-efficacy and motivation:what to do, what to say. *Intervention in School and Clinic*, *41*(4), 218-227.

Mellor, S., Barclay, L. A., Bulger, C. A., & Kath, L. M. (2006). Augmenting the effect of verbal persuasion on self-efficacy to serve as a steward: Gender similarity in a union environment. *Journal of Occupational and Organizational Psychology, 79*, 121-129.

Park, J. (2004). *Individual work environment (job characteristics) and work related attitudes in the telecommuting organization.*(Order No. 3126002, Nova Southeastern University). *ProQuest Dissertations and Theses,* , 151-151 p. Retrieved from http://search.proquest.com/docview/305043814?accountid=38885. (305043814)

Pati, S. P., & Kumar, P. (2010). Employee engagement: Role of self-efficacy, organizational support & supervisor support. *Indian Journal of Industrial Relations*, *46*(1), 126- 137.

Pennington, D. C. (2003). Social learning and social cognitive approaches. In *Essential Personality* (3rd ed., pp. 179-181). London, Great Britain: Hodder Arnold.

Pethe, S., Chaudhary, S., & Dhar, U. (2005). *Manual for occupational self efficacy scale*. Agra, India: National Psychological Corporation.

Raghuram, S., Wiesenfeld, B., & Garud, R. (2003). Technology enabled work: The role of self-efficacy in determining telecommuter adjustment and structuring behavior. *Journal of vocational behavior*, *63*(2), 180-198.

Rao, V. S. (2010). Job design, work scheduling and motivation. In *Human resource management* (3rd ed., pp. 353-356). New Delhi, India: Excel books.

Schultz, D. P., & Schultz, S. E. (2002). Working conditions. In *Psychology and work today: An introduction to industrial and organizational psychology* (10th ed., pp. 315-316). Upper Saddle River, N.J: Prentice Hall.

Schyns, B. & Collani, G. (2002). A new occupational self -efficacy scale and its relation to personality constructs and organizational variables. *European Journal of Work and Organizational Psychology, 11* (2), 232-41.

Siha, S. M., & Monroe, R. W. (2006). Telecommuting's past and future: A literature review and research agenda. *Business Process Management Journal, 12*(4), 455. doi:http://dx.doi.org/10.1108/14637150610678078

Sillince, J., & Shipton, H. (2013). More than a cognitive experience unfamiliarity, invalidation, and emotion in organizational learning. *Journal of Management Enquiry*, *22*(3), 342-355. doi:10.1177/1056492612469058

Staples, D. S., Hulland, J. S., & Higgins, C. A. (1999). A self-efficacy theory explanation for the management of remote workers in virtual organizations. *Organization Science*, *10*(6), 758-776. doi:10.1287/orsc.10.6.758

Sullivan, J. (2013, February 26). How Yahoo's decision to stop telecommuting will increase innovation. Retrieved November 26, 2013, from http://www.ere.net/2013/02/26/how-yahoos-decision-to-stop-telecommuting-will-increase-innovation/

Tannenbaum, S. I., Mathieu, J. E., Salas, E., & Cannon-Bowers, J. A. (1991). Meeting trainees' expectations: The influence of training fulfillment on the development of commitment, self-efficacy, and motivation. *Journal of Applied Psychology*, *76*(6), 759-769. doi:10.1037/0021-9010.76.6.759