

A Study of Personality Traits, viz., Extraversion and Introversion on Telecommuters' Burnout

Rahil Meymandpour*, Zahra Bagheri**

*Ph.D. Student, Department of Management Sciences, Savitribai Phule Pune University, Pune, Maharashtra, India. Email: meymandpour.rahil@yahoo.com

**Associate Professor, Department of Biostatistics, Shiraz University of Medical Sciences, Shiraz, Iran. Email: bagherizb@gmail.com

ABSTRACT

In this study with regard to employees' personality types, namely, extroverts and introverts based on Jung's typology Model, it is targeted to demonstrate which group has more congruencies to the features of telecommuting to experience less burnout result from the qualities of this type of workplace. Besides, the model of this study is inspired by person-environment fit theory. The samples were 86 females and 130 males from Ministry of Cooperatives, Labour and Social Welfare of Iran. The teleworking burnout and personality questionnaires with 28 statements for gathering data; in addition, SPSS 16 and Lisrel 8.8 for descriptive and inferential statistics were applied. From given data, it was obvious there was a correlation between extraversion and burnout with correlation rate of 0.55, whereas introversion had zero effect on burnout with correlation rate of -0.13. It can be concluded introverted employees can face stresses resulting from telecommunication more easily than extroverted ones regarding differences between these two characteristics.

Keywords: Extraversion-Introversion Personality Traits, Telecommunication, Burnout

1. INTRODUCTION

The extended services usage of informative technology and its effect on human's life in various ways is an avowed phenomenon (Amiel & Sargent, 2004). Social interaction through the Internet has more benefits than traditional one (Bargh & McKenna, 2004), so the function of telecommunication has increased (Useem & Harington, 2000) enabling employees to have a remote office work (Herschel & Andrews, 1997), called 'telecommuting', coined by Jack Nilles in 1973 (Nilles, Carlson, Gray & Hanneman, 1976). Whereas anybody designated to telecommute has not the capability of doing so (Novaco & Gonzalez, 2009). It might be a well-chosen professional for individuals who cannot declare themselves in face to face interaction (Amichai-Hamburger & Ben-Artzi, 2000; McKenna, Green & Gleason, 2002). Moreover the effect of personality characteristics on work-related outcomes is an escapable phenomenon (George, 1992). Then employers can find the suited-personality employees to telework, being independent on social interactions in workplace (Moss & Carey, 1994). From the point of view of personality, it can be either extrovert or introvert one (Jung, 1971). The former type is sociable, seeks more companionships and extrinsic opportunities to interact and

being with others. While the latter type prefers one's own companionship, doesn't enjoy large social events and is seen as quiet and remote individual (Eysenck & Eysenck, 1975). Verily, employers should assess employee's suitability to recruit adaptable one for such a remote work (Whitehead, 1999) which has features like employees' less informal interactions (Ellison, 1999) and no face to face contact with the addressee resulting in outcomes such as the feeling of being in the highly protective milieu (Hamburger & Ben-Artzi, 2000) and role ambiguity leading to job stressors (Martino & Wirth, 1990). So these job characteristics and stressors bring about employee's burnout (Van den Broeck, Vansteenkiste, De Witte & Lens, 2008).

Burnout is defined as a chronic response to emotional and interpersonal stressors (Maslach, Schaufeli & Leiter, 2001). So employees should carry an especial personality to handle the features of telecommuting. Individual characteristics can affect telecommuting practices and adoption (Peters, Tijdens & Wetzels, 2001). In the context of a research problem, it is worthwhile to investigate whether personality styles; extraversion and introversion can have significant effects on the employees' teleworking burnout. In the following related works are inquired to find a proper answer.

2. BRIEF LITERATURE REVIEW

However, some works consider telecommuting as a coping strategy reducing job stressors (Hartig, Kylin & Johansson, 2007), telecommuting features as stated previously bring about outcomes leading to job stressors and eventually burnout (Van den et al., 2008). Negative responses from personality to working environments lead to stress. As respects, Lewin (1951) is the first pioneer having research about mutual interaction between person and environment leading to positive/negative responses. Other scientists formalize this notion into the person-environment fit model in which they argue the mismatch between person and work environment impressing his/her health resulting in stress (French, 1973), chronically burnout; as some theories find personality characteristics and job environments can be factors leading to burnout (Ivacovides, Fountoulakis, Kaprinis, & Kaprinis, 2003).

Besides, Peters et al. (2001) assert in their study that desire for a quiet job environment is a significant feature affecting telecommuting outcomes. According to this telecommuting feature and all stated before and also characteristics in introverts and extroverts, some scholars such as Whitehead (1999) and Blau and Barak (2012) emphasize introverts are the suited ones to unsocial jobs in which they can find their hereditary isolation, while they would be uninspired jobs for their extroverted counterparts. Simmons (1996) also implies teleworking requires a naturally introverted employee. In her work Hannay (2016) explains introverted individuals are more suited to teleworking than extroverted ones since social isolation in telecommuting fits introversion personality.

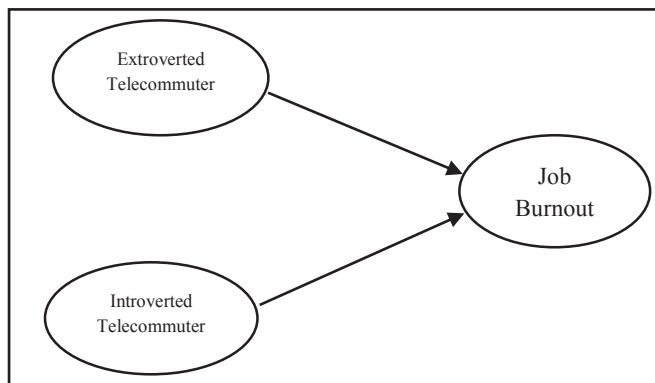


Fig. 1: Theoretical Model of this Study

Through previous studies it can be inferred introversion personality fits telecommuting workplace due to matching between introverted individuals' characteristics and teleworking features. So in this paper, Jung's

(1971) personality typology including extraversion and introversion can touch on this issue. Additionally, the basis of present model is the theory of person-environment fit (French, 1973) in which job outcomes influenced under the matches between personality types and job settings. Thus any mismatches lead to job stressors and eventually burnout which is the discussing issue in this study targeted to test the impacts of personality types, viz., extraversion and introversion, based on Jung's personality typology (1971), on telecommuters' burnout. The theoretical model of this research is shown in the following diagram:

3. OBJECTIVE

In this paper it is aimed to aver whether introversion has negative relationship with burnout. As it is seen from the diagram-1 it is hypothesized in the studied model both extroverted and introverted personalities would bring about burnout to prove which one would not. So the questions in this paper can be:

- Has extraversion positive relationship with teleworking burnout?
- Has introversion positive relationship with teleworking burnout?

4. RESEARCH METHODOLOGY

In this correlation study, the statistical population is selected based on judgment sampling method from Ministry of Cooperatives, Labour and Social Welfare of Iran which is the first organization in Iran set telecommuting as the remote part-time job setting for its employees. The sample size is calculated through NCSS/PASS software being 216 cases including 86 females and 130 males.

To reach the objective of this study and to prove the hypotheses; the secondary data was collected from books, articles and e-journals and the primary data was collected through researchers' observation, and the informal discussion was also done with those employees about the drawbacks and benefits of telecommuting setting which were the low-speed Internet, family problem, not being oriented with IT, loosing self-confidence in workplace, etc. as the drawbacks and having more time for dealing with personal and work affairs, getting familiar with IT application, solving commuting disorders, etc. as benefits. Moreover, the two 5-point Likert scaled questionnaires were applied including:

Teleworking burnout questionnaire derived from job burnout inventory (Maslach & Jackson, 1981) with frequency and intensity of 0.89 and 0.86, 0.77 and 0.72, and the 0.74 and 0.74 for three subscales, viz., emotional exhaustion, depersonalization, and job inefficacy, respectively, constituting 12 statements (each subscale constitutes 4 statements). The attained Cronbach's alpha of teleworking burnout is 0.96.

Personality questionnaire derived from the Eysenck personality questionnaire (EPQ) (Eysenck & Eysenck, 1975) with average reliability of 0.86 for male and female in extra-intro scale (Eysenck, Eysenck & Barrett, 1985) and extensive consensus concerning the validity of most versions of Eysenck's personality inventory/questionnaire such as Wilson and Doolabh's study (1992) possesses acceptable one. In the present study the personality questionnaire is conducted two traits; extraversion and introversion with the consideration of 8 statements for anyone. The alpha is 0.93 for extraversion and the same figure for introversion.

Categorical confirmatory factor analysis (CCFA) was used to evaluate the structure validity of the studied questionnaires. Several criteria were used to assess goodness of fit, including chi-square statistics, root mean square error of approximation (RMSEA), Tucker-Lewis index (TLI), and comparative fit index (CFI). Nonsignificant values of chi-square test (chi-square value can be significant at 0.1 level then it can be interpreted variables have relationship with each other), values of CFI and $TLI \geq 0.95$, and $RMSEA \leq 0.08$ can support acceptable model fit since Hu and Bentler (1995) imply TLI value is usually lower than CFI meanwhile values more than 0.90 or 0.95 are considered acceptable. However, chi-square statistics detects even trivial differences under large sample size (Cheung & Rensvold, 2002); in this study the other above-mentioned indices were used as well. The Mean- and Variance-adjusted Weighted Least Square (WLSMV) estimation procedure in the LISREL software was used to perform the CCFA.

The values of fit indices (RMSEA, CFI, and TLI) for the CCFA in Table-1 indicate one-factor model for burnout questionnaire and introversion and extroversion questionnaires fit the data well ($RMSEAs < 0.10$, $CFIs \geq 0.98$, and $TLIs \geq 0.97$) which confirm the construct validity of all questionnaires.

The descriptive statistics through SPSS 16 is used for correlation between three variables. Moreover, for testing

the studied model, structural equation modeling (SEM) through Lisrel 8.54 is used.

Table 1: Goodness of Fit Indices for Assessing Structure Validity

Factor	Goodness of fit indices			
	$\chi^2(df)^*$	CFI	TLI	RMSEA
burn out	312.4(54)	0.99	0.98	0.10
Extraversion	62.52(20)	0.99	0.98	0.09
Introversion	99.9(20)	0.98	0.97	0.11

* χ^2 is significant at 0.1 Level

5. FINDINGS

The significance of relationship between three variables is attained through the correlations resulted from descriptive statistics as shown in Table 2:

Table 2: Pearson Correlations of Three Variables N=216

Raw	Variables	1	2	3
1	Burnout	-		
2	Extraversion	0.59**	-	
3	Introversion	-0.42**	-0.58**	-

** Correlation is significant at the 0.01 level

As it is seen in Table-2 three variables have significant correlation at the 0.01 level. Actually, burnout and extraversion have positive relationship between each other while introversion has negative relationship with two others.

Figure obtained through SEM is offered in the diagram-2:

It can be said from the diagram-2 the results achieved from SEM to test the model is the same as the results of descriptive statistics, means there is direct relationship between burnout and extroversion meanwhile there is inverse relationship between burnout and introversion.

There is fit statistics achieved from SEM to prove the significance of tested model. Actually, the values of fit indices showed the model fit the data well so the hypothesized model is correct. The following table is fit statistics and the optimal cut points:

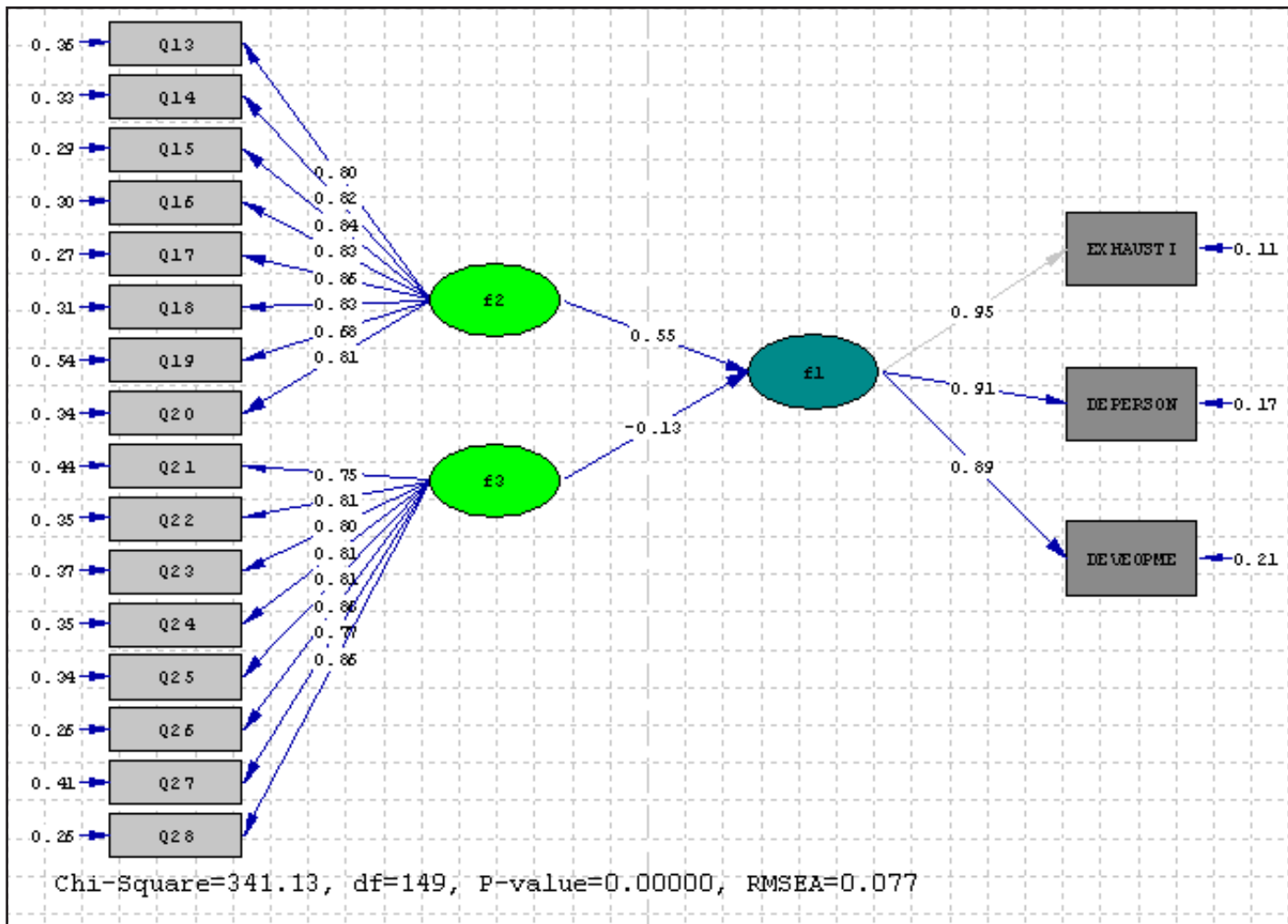


Fig. 2: The Basic Model of Testing the Impacts of Personality Traits, viz., Extraversion and Introversion on Telecommuters’ Burnout f1. Burnout, f2.Extraversion and f3. Introversion

Table 3: Fit Statistics and the Optimal Cut Point

Row	Fit Statistics and the Optimal Cut Point	Figures
1	Chi-Square (P=0.0)	341.13
2	Degree of Freedom (DF)	149
3	Comparative Fit Index (CFI) CFI 0.95	0.95
4	Goodness of Fit Index (GFI) GFI 0.95	0.86
5	Root Mean Square Error of Approximation (RMSEA) RMSEA ≤ 0.08	0.077

Chi-Square with P-Value 0.0 shows significant relationship among variables. CFI value > 0.95 is acceptable as the Table-3 shows the same. GFI > 0.90 or 0.95 is considered acceptable (Hu & Bentler, 1995) though in Table-3 GFI indicates approximately the same. Thus, figures obtained

through SEM shown in Table-3 indicate tested model is a good fit for the present research data.

Additionally, through Regression Analysis, the functional relationship between the variables are achieved (Table-4):

Table 4: Regression Analysis

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	5.716	1.346		4.247	.000
	extroverted	1.974	.253	.523	7.803	.000
	introverted	-.480	.261	-.124	-1.842	.067

a. Dependent Variable: burnout

From Table-4 it can be interpreted if extraversion score increases by 1, burnout unaverage increases by 1.97 and if introversion score increases by 1, burnout unaverage decreases by 0.48 indicating extraversion has positive relationship with burnout (increasing extraversion leads to increasing burnout or vice versa) meanwhile introversion has inverse relationship with burnout (increasing introversion leads to decreasing burnout or vice versa).

6. DISCUSSION

The present study is an attempt to indicate the relationship between personality styles; extraversion and introversion, and burnout. In the light of the above results in Table-3, the goodness of the studied model is proved as seen in fit statistics obtained through testing primary model in SEM. As shown in the findings, it can be construed both predictor variables; extroverted and introverted personality have significant relationship with the criterion variable; burnout. Table-2 connotes the correlation between extraversion and burnout is a direct one thereby an increase in extroverted personality follows by an increase in telecommuting burnout. Whereas, introversion has an inverse correlation with variables extroversion and burnout which means an increase in introverted personality occurs with a decrease in extroverted personality and burnout. It is seen from Table-1 Chi-Square values indicate there is a significant relationship among variables (it can be obtained online through Chi-Square Distribution Calculator and Chi-Square Critical Values Table as well). So according to later data as well, it can be presumed extraversion has positive relationship with burnout, introversion has negative relationship with burnout and moreover extraversion and introversion have negative relationship with each other. Additionally, it is obvious from diagram-2 there is a positive statistical significance of 0.55 between extraversion and burnout while negative one of -0.13 between introversion and burnout. On the other hand, as it is offered in Table-2, figures imply extroverted and introverted personalities have a remarkable inverse relationship to each other. Definitely, any extroverted

individual cannot have introverted personality as well. Similarly, in Regression Analysis (Table-4) the nature of the relationship between variables is established and the strength of the model is represented as well. An increase in employee's extroversion personality will increase telecommuting burnout by 1.97 and an increase in introversion personality will decrease telecommuting burnout by 0.48. Through all these interpretations it can be concluded that teleworkers with extroverted personality are more apt to take burnout symptoms during telecommuting job whereas introverted teleworkers show less potential to take telecommuting burnout symptoms. It seems extroverted traits in employees do not suit with telecommuting features although findings show vice versa in introverted employees.

The significance of these findings is that with the help of the obtained results, organizations have this option to match employees' personality to their remote job to prevent or decrease job burnout especially in this constant changing era where IT developments may cause some obstacles for organizations as well.

On the other hand, since the objective of this work is studying of the relationship of extraversion and introversion with telecommuting burnout, the scope of studied theoretical model is limited to only the effects of two traits of personality, viz., extraversion and introversion on telecommuting burnout. Then, the results cannot be associated with other personality styles. Furthermore, other internal and external factors impressing individual's burnout are neglected in this research. In virtue of limited variances in this study, it seems highly improbable to expand these results to other factors and variables. Additionally, since the parameters in this study were limited to those mentioned variables and it was dealt with only the effects of teleworkers' personality on their job burnout and since in the informal discussion, employees mentioned some other factors as pros and cons of dealing with telecommuting; employees' introversion trait might not show its positive relationship with their job burnout.

7. CONCLUSION

Generally, as respects above discussion, it would be concluded in the studied model which is on the basis of French's model of person-environment fit; individual's personality can have a significant effect on her/his wellbeing in job environment. Actually, personality traits, extraversion and introversion which are studied in this research can determine individual's burnout in remote job setting. With respect to French's model it can be said features of extroverted personality misfits with features of remote work environment, therefore it brings about telecommuter's burnout. On the other hand, features in introverted personality matches with features in this kind of job setting, hence mitigates employees' burnout caused through telecommuting features. Despite of these conclusions, it cannot be said the results are absolutely emerged because of personality types since the teleworkers were not in absolute teleworking job setting so the results can be affected by environmental impacts teleworkers were facing.

REFERENCES

- Amichai-Hamburger, Y., & Ben-Artzi, E. (2000). The relationship between extraversion and neuroticism and the different uses of the Internet. *Computers in Human Behavior*, 16(4), 441-449.
- Amiel, T., & Sargent, S. L. (2004). Individual differences in Internet usage motives. *Computers in Human Behavior*, 20(6), 711-726.
- Bargh, J. A., & McKenna, K. Y. A. (2004). The Internet and social life. *Annu. Rev. Psychol.* 55(1), 573-590.
- Blau, I., & Barak, A. (2012). How do personality, Synchronous media, and discussion topic affect participation? *Educational Technology & Society*, 15(2), 12-24.
- Cheung, G. W., & Rensvold, R. B. (2002). Evaluating goodness-of-fit indexes for testing MI. *Structural Equation Modeling*, 9, 235-55
- Ellison, N. B. (1999). Social impacts: New perspectives on telework. *Social Science Computer Review*, 17(3), 338-356.
- Eysenck, H. J., & Eysenck, S. B. G. (1975). *Manual: Eysenck personality inventory*. San Diego, CA: Educational and Industrial Testing Service.
- Eysenck, S. B. G., Eysenck, H. J., & Barrett, P. (1985). A revised version of the psychoticism scale. *Personality and Individual Differences*, 6(1), 21-29.
- French, J. R. P., Jr. (1973). Person-role fit. *Occupational Mental Health*, 3(1), 15-20.
- George, J. M. (1992). The role of personality in organizational life: Issues and evidence. *Journal of Management*, 18(2), 185-213.
- Hannay, M. (2016). Telecommuting: using personality to select candidates for alternative work arrangements. *Journal of Management and Marketing Research*, 20, 1-12.
- Hartig, T., Kylin, C., & Johansson, G. (2007). The telework tradeoff: Stress mitigation vs. constrained restoration. *Applied Psychology: An International Review*, 56(2), 231-253.
- Herschel, R. T., & Andrews, P. H. (1997). Ethical implications of technological advances on business communications. *Journal of Business Communications*, 34, 160-170.
- Hu, L. T., & Bentler, P. M. (1995). Evaluating model fit. In R.H. Hoyle (Ed.), *Structural equation modeling: Concepts, Issues, and Applications* (pp. 76-99). Thousand Oaks, CA: Sage.
- Ivancovides, A., Fountoulakis, K. N., Kaprinis, St., & Kaprinis, G. (2003). The relationship between job stress, burnout and clinical depression. *Journal of Affective Disorders*, 75(3), 209-221.
- Jung, C. G. (1971). *Psychological types*. Princeton, NJ: Princeton University Press. ISBN 0-691-01813-8.
- Lewin, K. (1951). *Field theory in social science: Selected theoretical papers*. D. Cartwright (Ed.). New York: Harper & Row.
- Martino, V. D., & Wirth, L. (1990). Telework: A new way of working and living. *International Labour Review*, 129(5), 529-554.
- Maslach, C., & Jackson, S.E. 1981. The measurement of experienced burnout. *Journal of Occupational Behaviour*, 2(2), 99-113.
- Maslach, C., Schaufeli, W. B., & Leiter, M. P. (2001). Job burnout. *Annu. Rev. Psychol.* 52, 397-422.
- McKenna, K. Y. A., Green, A. S., & Gleason, M. J. (2002). Relationship formation on the Internet: What's the big attraction? *Journal of Social Issues*, 58(1), 9-32.
- Moss, M., & Carey, J. (1994). Telecommuting for individual and organizations. Annual Review of Communications. *International Engineering Consortium*, 47, 324-329.
- Nilles, J. M., Carlson, F. R., Jr., Gray, P., & Hanneman, G. J. (1976). *The telecommunications-transportation trade off: Options for tomorrow*. New York: Wiley.

- Novaco, R. W., & Gonzalez, O. (2009). Commuting and well-being. In Y. Amichai-Hamburger (Ed.), *Technology and well-being* (pp. 174-205). Cambridge University Press.
- Peters, P., Tijdens, K., & Wetzels, C. (2001). Factors in employees' telecommuting opportunities, preferences and practices. Research Paper #8, Department of sociology/ICS, Utrecht University.
- Useem, J., & Harington, A. (2000). Welcome to the new company town. *Fortune*, 62(74), 8-25.
- Van den Broeck, A., Vansteenkiste, M., De Witte, H., & Lens, W. 2008. Explaining the relationships between job characteristics, burnout and engagement: The role of basic psychological need satisfaction. *Work and Stress*, 22(3), 277-294.
- Whitehead, M. (1999). Churning questions (call centres). *People Management*, 5(19), 46-48.
- Wilson, D. J., & Doolabh, A. (1992). Reliability, factorial validity and equivalence of several forms of the Eysenck personality inventory/questionnaire in Zimbabwe. *Personality and Individual Differences*, 13(6), 637-643.