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Psychological Well being : The Moderating
Effect of Personality Traits such
as Neuroticism and Extraversion**

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**ON-THE JOB, OFF-THE JOB SATISFACTION AND PSYCHOLOGICAL
WELL BEING:
The Moderating Effect of Personality Traits such as Neuroticism and Extraversion ¹**

by²

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Abstract

The general objective of the study was to empirically test a model pertaining to the relative impact of job satisfaction and life satisfaction on psychological well being., controlling for the moderating effects of personality. 460 employees working in 34 car dealerships in Northern Quebec (56% responses rate) were surveyed. The multiple item questionnaires were analysed using correlation analysis and hierarchical regression procedures. Albeit the fact that both job dissatisfaction and life dissatisfaction have a negative impact on well being (i.e. direct effect), the relationships change significantly when personality types enter the equation. Moderator effect was examined via the use of Hierarchical regression. The findings suggest that regardless of the source of dissatisfaction (i.e. work or life), individual psychological well being is largely influenced by personality characteristics. Personality was not found to be a moderator but rather an important independent variable. The original research hypotheses/questions are challenged, and a revised model is proposed.

Résumé

L'objectif de cette étude était de vérifier la pertinence empirique d'un modèle mettant en relief l'influence de la satisfaction au travail et de la satisfaction dans la vie sur le bien-être psychologique. Au-delà de la relation directe entre les satisfactions et le bien-être psychologique, le modèle intégrait l'influence modératrice de certains facteurs de personnalité nommément l'extraversion et le névrosisme. La vérification empirique s'est faite auprès de 460 travailleurs (taux de réponses de 56%) répartis dans 27 entreprises du secteur de l'automobile du Nord-Ouest québécois. Les données issues de l'enquête furent principalement circonscrites par le biais d'analyses de corrélation et de régressions hiérarchiques. Les résultats indiquent que l'insatisfaction au travail ainsi que l'insatisfaction dans la vie ont une influence négative sur le bien-être psychologique individuel. De plus, les facteurs de personnalité semblent avoir aussi un effet direct sur le bien-être psychologique. L'effet modérateur de l'extraversion et du névrosisme n'a pas été confirmé par les résultats de la régression hiérarchique. Les résultats suggèrent que peu importe la source d'insatisfaction (cf.: sphère professionnelle ou sphère personnelle), le bien-être psychologique est grandement influencé par les caractéristiques de la personnalité. En ce sens, des réponses sont apportées aux questions initiales de recherche et un modèle explicatif alternatif est proposé.

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Concern for the quality of working life preoccupied social scientists for the past 50 years. It is no wonder that thousands of studies revolved around the concept of job satisfaction as a core concept of it (Cranny, Smith et Stone, 1992). Job satisfaction has been studied as an independent variable explaining such outcomes as direct performance, indirect performance (absenteeism, lateness, accidents, turnover and alike) as well as physical and mental well-being (Auerbach and Dolan, 1997, Baba and al., 1998). However, as organizations are struggling to survive and to become more efficient, an accrued interest has evolved into the concept of work-life relationships. Researchers examine why people behave the way they do, how does these behaviors effect their health and performance, and how to manage these behaviors so that the organization can achieve better economic results and survive in an increasingly competitive business environment. These interests gave rise to many organizational innovations of which individuals' life outside work becomes an important concern for the organization; it gave rise to organization sponsoring such programs as Employee Assistant, Recreational Activities, and many more.

Nonetheless, while the generic logic for connecting life at work and outside work has become popular amongst managers, organizational consultants and social writers (e.g. Dunn, 1998), only a few scientific studies examined the real and relative impact of job satisfaction and life satisfaction (i.e. off the job satisfaction) on well being. Moreover, the relationship between job satisfaction and life satisfaction is quite controversial; some view the relationships between work and life satisfaction in terms of spillover effect (Wilensky, 1960, Judge and Watanabe, 1993), others view it as a compensatory effect (Mansfield and Evans 1975; Kabanoff 1980; Rain et al., 1991), and yet other suggest a segmentation effect (Gupta and Beehr, 1981). Regardless of the type of relationships between these two concepts, both were found to play an important role in explaining emotional, psychological or affective well being (Judge & Locke, 1993; Judge & Hulin, 1993).

One of the most consistent and robust findings in attempting to explain psychological well-being is that the components of this construct are moderately related to personality (Diener and Lucas, 1998; Diener et al, 1999). Like personality traits, psychological well-being is consistent across the life-span, even after the occurrence of intervening life events. Of the many personality traits studied by researchers, the personality traits that are most consistently and strongly related to psychological well being are extraversion and neuroticism. Extraversion is moderately correlated

with pleasant affect (i.e. positive well being), and neuroticism is strongly correlated with unpleasant affect (i.e. negative well being) (Bradburn, 1969; Costa and McCrae ,1980). Other traits (e.g., optimism, self-esteem) do correlate with well-being, but the direction of causality in these relations has not been determined (Diener and Lucas, 1997).

Methods, Procedures and Objectives

The larger study examines a reciprocal (bi-directional) model of job and life satisfaction while controlling for personality, individual needs, career progression, and social demographic variables (Gosselin, 2000) . In this study, however, only a partial model was tested. It reports on results pertaining to the moderating effects of the personality traits.

Table 1 provide a synoptic summary of the principal variables included in the study and their respective psychometric properties.

Table 1 : description of the Principal variables

Variable	Source	# Items & Reliability	Mean	SD
Psychological Well- Being Problems (PWBP)	Sub-scale from Cohen et al., (1983)	3 items $\alpha = .75$	2.7	.88
Job/Work Satisfaction	Dolan (1979); Dolan & Arsenault (1983)	3 items $\alpha = .73$	3.7	.69
Life Satisfaction	Satisfaction with Life Scale (Diener et al (1985)	5 items $\alpha = .85$	3.6	.73
Personality : Neuroticism	Modified from 16 PF Cattell (1957, 1977)	14 items $\alpha = .66$	11.4	4.9
Personality : Extraversion	Modified from 16 PF Cattell (1957, 1977)	14 items $\alpha = .71$	17.4	5.1

The more specific objectives of the study were twofold:

1st Objective: To examine the relative impact of Job and life Satisfaction on psychological well-being (PWB)

2nd Objective To empirically test the moderating effect of two personality traits on PWB

Sample: 827 employees working in 34 car dealerships in Northern Quebec received a mail questionnaire. The questionnaire was pre-validated and tested. 459 questionnaires (about 56% responses rate) were returned. Further verifications were made to consider the representativeness of the sample and results were very satisfactory; no noticeable difference was observed between the sample and the general population.

Results

A series of correlation analyses shows that both job satisfaction and life satisfaction are significantly related to PWB. Dissatisfaction at work is correlated with PWBP ($r = -.21$) and life dissatisfaction is also correlated with PWBP ($r = -.29$). Worth noting is that the magnitude of the correlations is relatively low. Both personality traits are correlated with PWBP, yet neuroticism seems to have more than double of the magnitude compared to extraversion ($r = .52$ and $r = -.20$, respectively). Thus, the tentative conclusion based on the bi-variate analysis is that people with high neurotic tendencies report significantly more psychological well being problems than those with low neurotic tendencies, and introverts report more PWBP than extraverts. The correlations analysis also points out some multi-collinearity between the sources of satisfaction and the personality traits; extraverts report higher levels of work satisfaction ($r = .26$) and life satisfaction ($r = .19$) compared to introverts; and, less neurotic people are more satisfied at work ($r = -.18$) and off-work ($r = -.33$). These results are quite similar to those reported by Tokar and Mezdylo (1997).

The bi-variate analyses, however, provide only a partial picture as PWB is a more complex phenomenon and require multivariate explanation. Furthermore, results become much clearer when the model is tested in steps. Thus moderated multiple regression procedure was used; it involved hierarchical regression as reported in Table 2. The procedure first tests the relationship of the predictors (e.g., Work and Life satisfaction) on the criterion variable (e.g. Psychological Well Being); secondly, the relationship of the independent variables (Work and Life satisfaction)

along with the moderators (Personality traits) treated as another set of independent variables are tested; and finally, a term that carries information about both predictors and the personality factors in an interaction (the interaction term) is being tested. The interaction term was computed for each subject by multiplying each of the two predictors by each of the personality traits. Rejecting the null hypothesis that $\beta_3 = 0$, indicates the presence of an interaction or moderating effect (Arnold, 1982; Evans, 1991). The "hierarchical" form of regression indicates that predictors are not entered into the regression equation simultaneously, but in a logical order. Typically, the independent predictors enter first, then the moderators and then the interaction.

Discussion and Conclusions

Previous research pertaining to subjective well-being refers to people's evaluations of their lives. These evaluations include both cognitive judgments of life and/or work satisfaction as well as affective evaluations of moods and emotions (i.e. psychological well being). The results reported in this study show very clearly that both personality traits and the perception of work and life satisfaction explain psychological well being (PWB). Although in relative terms life satisfaction explains more variance in well being than Work satisfaction, it is the personality factors that explains the vast majority of the explained variance. Thus, results contradicts the most prevalent personality theory pertaining to the buffering hypothesis of the latter. The former suggest that personality variables will either mitigate or exacerbate the relationship between psychological well being problems and its antecedents (Baba et al 1998). However, apart from a few studies (Roskies et al, 1993; Xie 1996) empirical studies testing for moderator effects of personality did not yield significant results for the interaction terms (Lee and Ashford, 1993).

Table 2 : Results of the Multiple Hierarchical Regression
(Dependent Variable: PWBP - Psychological Well Being Problem)

Model (step)	R ²	ΔR ²	B	β	t	and p
Model 1	.112	.112			Entire Model .000	
Constant			4.42		16.656	.000
Work Satisfaction			-.183	-.147	-2.763	.006
Life Satisfaction			-.292	-.249	-4.673	.000
Model 2	.290	.179			Entire Model .000	
Constant			2.764		8.595	.000
Work Satisfaction			-.136	-.110	-2.238	.026
Life Satisfaction			-.129	-.110	-2.198	.029
Neuroticism			7.806E-02	.451	9.81	.000
Extroversion			3.747E-06	.000	.000	NS
Model 3	.295	.005			Entire Model .000	
Constant			2.243		1.523	NS
Work Satisfaction			-4.54E-02	-.036	-.135	NS
Life Satisfaction			-7.68E-02	-.065	-.238	NS
Neuroticism			9.098E-02	.526	1.741	NS
Extroversion			2.090E-02	.123	.372	NS
WS x Neuro			7.822E-03	.171	.615	NS
WS x Extro			-1.03E-02	-.302	.439	.013
LS x Neuro			-1.15E-02	-.231	.351	.032
LS x Extro			4.613E-03	.133	.714	.015

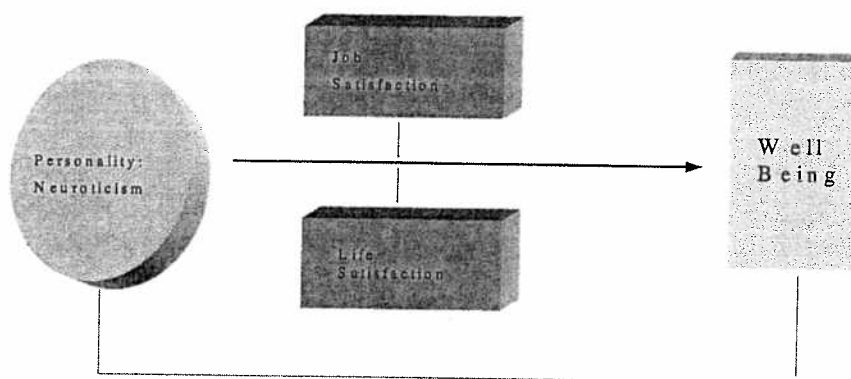
NS = Not significant

The personality traits that are most consistently and strongly related to PWBP are extraversion and neuroticism. Extraversion as reported by Diener et al (1997) has been moderately correlated with pleasant affect; neuroticism is strongly correlated with unpleasant affect. Thus, temperament models of the personality/PWBP relation posit that (a) individuals have biological set-points of emotional experience; (b) individuals have biologically determined emotional reactions to stimuli; or (c) individuals with certain temperaments are able to wrest more rewards from the environment, leading to greater happiness (i.e. satisfaction) and to lesser problems with well being). Longitudinal studies illustrate that PWB, like personality, shows some stability across time. The amount of pleasant affect, unpleasant affect is likely to remain moderately stable regardless of the satisfaction or dissatisfaction from work/life. This stability is due to

characteristic emotional styles which previous research report as consistent across diverse situations (Diener and Larsen , 1984). According to Deiner et al (1997) evaluations of one's life, whether affective or cognitive, do not result from a purely "bottom-up" process; people do not simply weigh the effects of various external circumstances to arrive at PWB judgments, because happiness remains moderately stable in spite of changing circumstances and changing environments. Thus, satisfaction with specific work/life domains likely is due to specific factors in that domain as well as a substantial influence from the person's general level of well-Being.

The results of this study, have several implications: (1) Neuroticism seems to be linked to pleasant and unpleasant affect (2) It also predict well-being above and beyond other predictors such as work and life satisfaction. At their most basic level of explanation, personality traits provide a useful method for categorizing people and their behaviors. The findings clearly suggest that introverts are more likely than extraverts to experience problems with their psychological well being, neurotics are more likely than stable people to experience the same problems. In relative terms, the results suggest a revised model of which: (1) The personality factors, namely neuroticism is the key independent variable, (2) Job and Life Satisfaction can be depicted as an intervening variables, and (3) Psychological Well Being (the dependent variable) is also connected with the independent variables via a feedback loop (see Figure 1).

Figure 1: The revised model



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