

Perceived Stress Scale as a Predictor of Professional Behavior and Aspects of Wellbeing

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Abstract

Stress is among the most studied and often mentioned concepts in psychology and continues to be so as it manifests in everyday life a harmful factor upon our health, whether psychological or physical. The present paper approaches stress in relation to the professional environment. Three versions of the Perceived Stress Scale have been applied within a group of 219 participants in order to determine each version's predictive value in relation to aspects of professional life (such as desire to leave the workplace, absenteeism, turnover, frustration regarding the workplace) but also wellbeing – related aspects (general wellbeing, physical health, experiencing frustration).

Thus, the present paper provides data regarding the predictive value of the three versions of Perceived Stress Scale (PSS) showing that the PSS-14 version is the most valid in predicting the mentioned aspects; also the study provides data describing the relation between stress and negative professional behavior and effects upon wellbeing.

Keywords: *stress, professional behavior, occupational stress, wellbeing, work satisfaction.*

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I. INTRODUCTION

Professional literature includes researchers who make a concrete and rich difference of the meaning of stress; taken as a positive aspect, stress can be a warning sign regarding the dangers around us, being associated with a biological response which has been supporting the human evolution. Stress as a source of tension and illness is a factor which biologically affects the individual, as it is caused by external factors of the environment (Ogden, 2007).

Thus, researchers have made the difference between the acute stress which is a response to certain factors such as passing an important exam, public speaking, among others and chronic stress as a response to environmental factors like workplace or family issues (Mark & Smith, 2008).

Stress as a general term refers to two distinctive concepts, respectively stressors (characteristics of the environment or thoughts which determine the individual to react aversively) or tensions (adverse reactions of the individual toward the stressors) (Cohen, Kamarck & Mermelstein, 1983; Beehr & O'Hara, 1987; Knapp, 1988 quoted by Bamber, 2006; Dewe, O'Driscoll & Cooper, 2010).

Stress can be defined differently by each person. For a laic person, stress means tension, or pressure, a strongly negative emotional response and uncontrollable external factors. Psychologists have defined stress in multiple ways, so the present definitions of stress mostly refer to the interaction between the human and the environment, external factors such as workplace pressure, highly strict deadlines, and volume of labor or other sources of tension. Stress can have psychological effects on the individual but also physiological, such as cardiovascular, digestive diseases but also behavioral changes (Ogden, 2007).

From Lazarus and Folkman's perspective (1984) stress represents a cognitive mediation between the product of what the individual offers and the environment. This approach is known as "the transactional theory of stress".

Some researchers found suitable to relate to stress all the activities which needed adaption. Today, society is so complex that it requires the person to adapt each day through an intense cognitive effort, specific styles and life actions which do not necessary lead to stress (Lazarus & Folkman, 1984).

If we wish to regard stress as a generic concept, we must delimitate it and integrate it in a meaningful way. We will further define stress from three perspectives: stimulation definitions, response definitions and rational definitions (Lazarus & Folkman, 1984).

Events considered to be cataclysmic, affect a number of people who are somehow connected (being relatives or friends), being an event which can't be controlled by the individual. Eloquent examples are the death of a close person or relative, having one's life threatened by the

incapacity of treating a disease (such as terminal cancer), divorce or an exam which is crucial to the individual's life (Lazarus & Folkman, 1984).

Day to day events can be called as stressful factors indifferent from the event's positive and negative nature and the capacity of adaptation (Holmes & Machida, 1974 quoted in Lazarus & Folkman, 1984).

Stress is the most important factor and one of the most studied concepts of modern psychology, including the organizational area (Szabo, Maull & Pirie, 1983; Cooper & Cox, 1985; Hammer et al., 1986; Smith, 1990; Crank & Caldero, 1991; Blix & Lee, 1991; Rees & Cooper, 1992; Kirkcaldy & Cooper, 1992; Sullivan, 1993; Evans & Coman, 1993; Bradley & Eachus, 1995; Wu et al., 2010; Pasca & Wagner, 2011).

Stress has been also studied in relation to other concepts such as work satisfaction (Whitley et al., 1985; Whitley et al., 1989; Mark & Smith, 2008; Aghdasi, Kiamanesh & Ebrahim, 2011), burnout (Lee, Chen, Xie, 2014; Dylag, Jaworek, Karwowski & Kozuznik, 2013; Hsu, Chen, Yu, & Lou, 2010), motivation (Hsu, Chen, Yu & Lou, 2010), wish of leaving the organization (Rickard et al., 2012) and performance. Also, stress has been also studied as a factor influencing the physical health (Morrison, 1990) and also mental health (Hopkinson et al., 1998).

Workplace satisfaction represents "the degree in which people like or not what they do at their workplace. Just as it is generally evaluated, workplace satisfaction is an attitudinal variable" (Spector, 1997). The concept can be understood as a "global feeling towards work or a constellation of related attitudes, on diverse aspects of work" (Spector, 1997).

Research regarding the dispositional source of workplace satisfaction did not have a uniformed history in the general domain of studies regarding workplace satisfaction. Even from the first treatments of work satisfaction, the personal basis has been considered.

Hoppock (1935, quoted by Judge, Heller & Mount, 2002) has found a strong correlation between the emotional adaptation of workers and the level of their workplace satisfaction. Also, Fisher & Hanna (1931) have come to the conclusion that a part of the disaffection was a result of the emotional maladaptation. On the other hand, the interest towards this area of research was gradually lost and renewed in 1980, through a series of provocative studies (Arvey, Bouchard, Segal, & Abraham, 1989; Staw, Bell, & Clausen, 1986; Staw & Ross, 1985, quoted by Judge, Heller & Mount, 2002). In the following 15 years, professional literature was enriched in this area, bringing arguments to support the theory that workplace satisfaction is partially generated by a dispositional source (House, Shane, & Herold, 1996, quoted in Judge, Heller & Mount, 2002).

Industrial success is part of the organization's functioning, and the employee's performance plays a determinant role regarding such success. At the workplace, employees play

a role which involves certain constructive behavior which further determines good performance (Fox & Spector, 1999).

Workplace frustration was intensively studied from the perspective of aggressiveness (Fox & Spector, 1999). The Dollard – Miller model asserts that aggressiveness is a consequence of frustration and influenced by the way the individual perceives workplace situations (Fox & Spector, 1999). The same authors assert that frustrating events have an effective response which determines a behavioral action.

The wish of leaving the work is a very important problem for the organizations nowadays. This wish of leaving the organization is related to high personnel fluctuation but also to high organizational costs. Although intensively studied, the wish of leaving the organization lacks known, reliable predictors (Mitra, Jenkins & Gupta, 1992).

Cohen (1999) shows there is a statically significant but quite weak relation between the employee's age and desire of leaving the organization ($r=-.18$), as this desire negatively correlates with perceived performance ($r=.22$) but correlates positively with activities of the organization which are not related to work ($r=.24$).

We may assert that people who are younger are prone to leave sooner the organization as a possible explanation could be their wish of promoting and receiving better incomes. Cohen (1999) also shows there is a strong negative correlation between professional satisfaction and the employees who no longer wish to remain in the organization ($r =-.48$).

Wellbeing is highly influenced by occupational stress but also by personality, more precisely through the Neuroticism and Extraversion factors (Ahmetoglu & Chamorro - Premuzic, 2013), as these authors assert that the Freudian perspective of wellbeing depends on the individual's capacity of working and loving. Wright and Doherty (1998) assert that there is a lack of studies concerning wellbeing, while this concept is very important for the employee's performance. Staw (1986) quoted by Wright and Doherty (1998) states that workplace satisfaction, together with wellbeing can improve the employee's objective performance.

Barrick and Mount (2009) show that absenteeism and the desire of leaving the organization are influenced by the level of the individual's Consciousness and Neuroticism.

Ones et colleagues (2008) quoted by Barrick & Mount (2009), conducting a meta-analysis, show that personality is a significant predictor of volunteer absenteeism, as consciousness, neuroticism and lack of agreeability influence the most this variable. Absenteeism is indirectly influenced by occupational stress.

We may consider that if occupational stress affects physical and psychological health, automatically absenteeism caused by weak health increases.

II. OBJECTIVES AND HYPOTHESIS

1. Objectives

The objective of the present paper is to study the relation between occupational stress and organizational behavior which includes wellbeing, workplace satisfaction, and desire of leaving the organization, workplace frustration and absenteeism.

2. Hypothesis

H1: There is a statistically significant relation between stress and workplace satisfaction.

H2: There is a statistically significant relation between stress and desire of leaving the organization.

H3: There is a statistically significant relation between stress and physical health.

H4: There is a statistically significant relation between stress and general wellbeing.

H5: There is a statistically significant relation between stress and workplace frustration.

H6: There is a statistically significant relation between stress and absenteeism.

H7: Occupational stress is a positive predictor of turnover.

H8: Occupational stress is a positive predictor of work frustration.

H9: Occupational stress is a negative predictor of wellbeing.

3. Participants

The study involved the participation of 219 people aged between 21 and 56 years old ($M_{age} = 30,49$; $SD = 7,65$), out of which 153 female and 86 male. The participants were selected via professional social websites such as Linked-in, as at the moment of completing the questionnaires, all participants were employed.

4. Instruments

4.1. Perceived Stress Scale has been built by Cohen, Kamarck, & Mermelstein (1983) and is a self-assessment questionnaire which comes in three versions, one of 14 items, one of 10 items and one of 4 items. According to the authors, the PSS questionnaire includes a Likert scale from 0 (never) to 4 (very often); an item example (“In the past month, how often have you felt upset because something unexpected occurred?”) shows an internal consistency of .89 (PSS-14), .88 (PSS-10) and .77 (PSS-4) (Cohen, Kamarck & Mermelstein, 1983).

4.2. Workplace satisfaction was evaluated with the help of three items extracted from the Michigan Organizational Assessment Questionnaire (MOAQ, Cammann, Fichman, Jenkins, &

Klesh, 1979). An item example is “I am generally satisfied with my present workplace”. Each item includes 7 answer options (where 1 shows strong agreement while 7, strong disagreement).

4.3. The intent of leaving the organization was evaluated with the help of three items composed by Jaros (1997). An item example is “During the past year I intent to leave the organization I work in at the moment”. Each item has 5 types of answer (1 = strongly disagree, 5 = strongly agree). Absenteeism was evaluated with the help of a single item (Johns & Xie, 1998): “In the past year, how many times have you skipped work due to absenteeism?”

4.3. Workplace frustration was assessed with the help of three items created by Peters & O’Connor (1980). An item example is “Conducting my work is a highly frustrating experience”. Each item includes 7 response versions (1= strongly disagree, 7= strongly agree).

4.5. General wellbeing has been evaluated with the help of five items of the SWLS (Diener, Emmons, Larsen & Griffin, 1985). An item example is: “I am satisfied with my life”. Each item has seven versions of answers (1= strongly disagree, 7= strongly agree). The general state of health was evaluated with a single item: “How would you evaluate the present state of health?” It comes with the following answer versions: 1= Bad, 2= Medium, 3= Good, 4= Excellent.

5. Procedure

Self-assessment questionnaires have been applied in the online environment via a professional social website (LinkedIn). The participants were informed regarding the objective of the study and its nature and that they are free to retreat from the procedure at any moment. No problems were overcome regarding consent. The estimated time of completion was between 15 and 20 minutes.

6. Experimental Design

The present study is a non-experimental, transversal design involving the simultaneous application of self-assessment questionnaires. The study variables were the following: stress, workplace satisfaction, physical health, absenteeism, workplace frustration, general wellbeing and desire to leave the organization.

III. RESULTS

Table 1 shows the descriptive statistics for the Perceived Stress Scale and the following variables: age, health, work satisfaction, frustration, and wish of leaving the organization, general wellbeing and absenteeism. Thus we may observe that age presents (M= 30,49; SD= 7,65), physical health (M= 3,81, SD= .78), PSS-14 (M= 22,33, SD= 8.05), PSS-10 (M= 15,47;

SD= 7,2), being very close to the mean obtained by the author in 2009 (M= 15,52) (Cohen & Janicki-Deverts, 2009), PSS-4 (M= 5,32, SD= 2,97), work satisfaction (M= 15,69; SD= 3,83), frustration (M= 8,65, SD= 3,69), wish of leaving the organization (M= 7,31, SD= 3,78), general wellbeing (M= 18,20; SD= 5,57) and absenteeism (M= 1,22; SD= .64).

Table 1. Descriptive statistics

	<i>Min</i>	<i>Max</i>	<i>M</i>	<i>SD</i>	<i>Skewness</i>	<i>Kurtosis</i>
Age	21	56	30,49	7,65	1,37	1,75
Health	1	5	3,81	.78	-.59	.39
PSS-14	3	40	22,33	8,05	.03	-.33
PSS-10	1	32	15,47	7,20	.00	-.49
PSS-4	0	12	5,32	2,97	.14	-.54
Work satisfaction	3	21	15,69	3,83	-.80	.62
Frustration	3	19	8,65	3,69	.51	-.03
Turnover	3	15	7,31	3,78	.52	-.82
Well-Being	4	28	18,20	5,57	-.48	-.19
Absenteeism	1	5	1,22	.64	3,58	14,42

Table 2. T test for independent samples

<i>Variable</i>	<i>Men</i>		<i>Women</i>		<i>t</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
PSS-14	20.19	7.64	23.28	8.06	2.73*
PSS-10	13.43	6.79	16.33	7.22	2.79*
PSS-4	4.48	2.47	5.69	3.09	-2.80*

Table 2 shows the mean differences between female and male participants regarding the perception on stress, so we may notice that male participants obtained lower scores for stress compared to female participants regarding stress measured by PSS – 14 (M₁= 20,19, M₂= 23,28, t= 2,73, p<.05), PSS-10 (M₁= 13,43, M₂= 16,33 t= 2,79, p<.05) and PSS-4 (M₁= 4,48, M₂= 5,69, t= 2,80, p<.05).

Table 3. Correlations between variables

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Health	-									
PSS14	-.44**	-								
PSS10	-.43**	.92**	-							
PSS4	-.37**	.84**	.90**	-						
Satisfaction	.17**	-.22**	-.20**	-.58**	-					
Frustration	-.08	.40**	.34**	.44**	.34**	-				
Turnover	-.12	.27**	.26**	.26**	.10	.10	-			
Wellbeing	.37**	-.56**	-.51**	-.59**	.69**	.32**	.20**	-		
Age	.00	-.07	-.11	.31**	.44**	.48**	.15**	.45**	-	
Absenteeism	-.14**	.01	.04	.03	-.28**	.02	-.06	.03	-.14**	-

Hypothesis 2 which specifies a statistically significant relation between stress and the desire of leaving the organization is confirmed, as a significant positive correlation was found between stress and desire to leave the organization ($r = .27$, $p < 005$).

Hypothesis 3 which specifies a significant relation between stress and physical health is confirmed, as a statistically significant negative correlation was found between stress and physical health ($r = -.44$, $p < 005$).

Hypothesis 4 which specifies a statistically significant relation between stress and general health is confirmed, as a statistically significant negative relation was found between stress and general wellbeing ($r = -.56$, $p < 005$).

Hypothesis 5 which specifies a significant relation between stress and workplace frustration is confirmed, as a statistically significant negative correlation was found between stress and workplace frustration ($r = .40$, $p < 005$).

The hypothesis stating there is a statistically significant relation between stress and workplace absenteeism is not confirmed, as there is no statistically significant correlation between stress and workplace absenteeism.

Table 4. Model Regression for PSS-14, PSS-10, PSS 4 and work frustration

	R	F	Adj. R ²	β
PSS-14	.16	42.55	.16	.40*
PSS-10	.11	29.02	.11	.34*

PSS-4	.11	28.61	.11	.34*
<hr/> PSS-14, PSS-10, PSS-4 –independent variables (predictors) Work frustration-dependent variables				

Table 4 shows a linear regression model which has been applied showing that PSS – 14 is the best predictor for work frustration, while the 10 and 4 items versions are statistically significant predictors but not as strong as the 14 items version. Therefore we may assert that the 14 items version is the most suitable and valid version to predict workplace frustration.

Table 5. Model Regression for PSS-14, PSS-10, PSS 4 and Turnover

	<i>M (SD)</i>	F	Adj. R ²	β
PSS-14	.07	17.78	.07	.27*
PSS-10	.07	16.07	.06	.26*
PSS-4	.08	16.32	.06	.26*
<hr/> PSS-14, PSS-10, PSS-4 –independent variables (predictors) Turnover-dependent variables				

In table 5 we may notice the three versions of the Perceived Stress Scale as turnover predictors, as we may assert that all three versions of the instruments are significant predictors of turnover.

Table 6. Model Regression for PSS-14, PSS-10, PSS 4 and WellBeing

	<i>R</i>	F	Adj. R ²	β
PSS-14	.32	102.76	.07	-.56*
PSS-10	.26	77.07	.06	-.51*
PSS-4	.23	65.50	.06	-.48*
<hr/> PSS-14, PSS-10, PSS-4 –independent variables (predictors) Wellbeing-dependent variables				

In table 6 we may notice the three versions of the Perceived Stress Scale versions as negative predictors of wellbeing. We may assert that the 14 items version is the best predictor of wellbeing, as a negative predictor. It is the most recommended variant to use when prediction regarding wellbeing behavior is intended.

IV. CONCLUSIONS

The study objective regarding the validation of Perceived Stress Scale (in all three versions) for professional behavior, as the instrument was proven to be a statistically significant predictor (all three versions) for workplace frustration, desire to leave the organization and wellbeing. The study results are consistent with professional literature (Ivancevich, Matteson & Preston, 1982; Motowidlo, Packard & Manning, 1986; Daniels & Guppy, 1993; Layne, Hohenshil & Singh, 2004; Avey, Luthans & Jensen, 2009).

To be more specific, we may observe that stress strongly correlates with workplace satisfaction, thus we may assert that when the stress level increases workplace satisfaction lowers, this result being also discovered by Nakakis and Ouzouni (2008).

Also we may observe that stress correlates to all behaviors and workplace attitudes such as negative correlation with physical health, concordantly to professional literature (Cohen, 2002; Hamrick, Cohen & Rodriguez, 2002; Miller, Ritchey & Cohen, 2002; Wright et al., 2002; Wright et al. 2004; Feldman et al., 2004; Miller et al., 2004; Wright, Cohen & Cohen, 2005; Chiu et al., 2012).

Further, stress shows statistically significant correlation to the desire of leaving the organization (Rickard et al., 2012), to absenteeism (Monstert, Rothmann, Monstert & Nell, 2008) and workplace frustration (Montowildo, Packard & Manning, 1986). Thus, stressed persons tend to skip work unmotivated, be unsatisfied with their workplace, have a precarious physical health, planning to quit one's job.

We should mention the present study limits such as the fact that the sample is rather narrow, impairing the possibility of extracting nation-wide significant results. Another limit consists in the fact that the applied questionnaires were self-report as subjectivity and social desirability may modify study results.

Recommendations should be taken into consideration regarding further investigations in the subject of professionally-related stress and wellbeing. As research has succeeded in tracing important relations between stress, professional behavior issues or impact on wellbeing, further studies should sight the efficiency of possible means of intervention upon the mentioned variables.

We consider that decision factors in the professional area, such as managers and coordinators should take into consideration any research contribution regarding stress and its effects upon the wellbeing, professional behavior and involvement of the employees but also be open to propose subjects to be researched. Well-documented interventions should increase the rate of positive feelings towards the workplace and implicitly towards productivity.

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