
RELATIONSHIP BETWEEN TYPE-A BEHAVIORAL PATTERN AND OCCUPATIONAL STRESS. A DETAILED MULTIDIMENSIONAL ANALYSIS

Vlad Tureanu¹

D&D Consultants, Bucharest

Abstract

Occupational health scholars have intensively speculated on the connection between occupational stress and the Type-A Behavioral Pattern. A wide variety of models investigating the underlying relationship between stressors, Type-A, ways of coping and stress symptoms have been tested and data seems to support those that describe a more direct connection between the four. Romanian adapted version of ASSET (A Shortened Stress Evaluation Tool, Cooper & Cartwright, 2002) has been used to measure eight sources of occupational stress, and four dimensions considered to rather be effects of work stress. The Romanian adapted version of SWS (Survey of Work Styles, Jackson & Gray, 1988) was used to measure six dimensions of the TABP from an organizational perspective. A set of N=109 valid parallel data was eventually analyzed searching for (a) relationships between the work stress and TABP dimensions and (b) significant differences between TABPs and TBBPs in terms of levels of work stress. Implications of the results are discussed.

Key-words: Occupational stress, Type A behavior pattern, ASSET, SWS

INTRODUCTION

Human stress, present in the every day life, seems to have considerable chances of becoming the “unfortunate celebrity” of the modern world. It has gained this status the very moment stress entered the pool of the 10000 most used vocabulary words encountered in the communication of both white and blue collars in the industrialized nations. Within this context, work or occupational stress is, across the globe, a central preoccupation, not only to the individuals or organizations, but especially to government organisms striving to formally secure decent levels of work health. Therefore the efforts for thoroughly describing and explaining the phenomenon, initiated by Selye as early as 1926, in the beginning of his career, have nowadays given fruit to an important legacy of scientific work. This work comprises a number of theories and models trying to explain occupational stress and an ever-growing yet heterogeneous group of case and experimental studies.

Work stress

Initial efforts to formulate a definition of work stress have been successful in covering

only partial aspects of the phenomenon. While this helped distinguish between other types of stress and the one emerging from the individual’s interaction with the organization, it provided a rather narrow explanative basis. Some definitions exclusively regarded work stress as a complex environmental stimulus that affects the individual, while others regarded it as an individual response to certain situational forces (Beehr & Franz, 1987). More recent perspectives focusing on the dynamics of the work stress have defined it as an incompatibility, a lack of fit between the individual and the work environment (Humphrey, 1998).

A formal and more specific approach (as provided by the US Department of Health and Human Services through it’s specialized National Institution for Occupational Safety and Health) defines work stress as a harmful physical and emotional response that occurs when the requirements of the job do not match the capabilities, resources, or needs of the worker (NIOSH, 1999). The definition, developed under APA supervision, is actually reflecting one of the most solid and modern paradigms regarding work stress initially formulated by Richard Lazarus. The transactional model of work stress states that the phenomenon occurs through a multi-stage process: (a) through a first appraisal the individual evaluates the stressor, namely what the organization expects him to do and (b)

¹ Adresa de corespondență:
vlad.tureanu@apio.ro

through the second appraisal the individual assesses his/ her own ability to cope with the stressor, namely to properly and efficiently respond to the organizational requests (Lazarus & Folkman, 1984). If, during both of the two stages, the results are negative – i.e. there is a lack of concordance between the work requests, the individual commitment to the organization and the individual resources for actually performing the requested actions – the person will suffer stress. As Cooper & Cartwright (2002, p.6) aptly put it “stress is in the eye of the beholder” since “a stressor has to be perceived and recognized by the individual as overwhelming their ability to cope, to be felt as such”.

While the framework provided by this model is valuable through its comprehensibility, it is in the same time challenging, for it reveals an important number of elements and sequence of processes that lead to stress and its manifesting symptoms. On one hand, the work stress phenomenology depends on certain personality traits that in many cases moderate the relationship between the individual and the organization. On the other hand, work stress appears sometimes as a direct effect of certain organizational situations or events. Ways of coping are determining the manner in which the individual deals with organizational pressure, also being in the same time dependent on the personality structure. The interaction of all the previous may produce the actual psychological and physiological work stress syndromes.

These factors have been summarized into four general groups: (a) stressful situations and events, (b) personality factors, (c) coping and (d) symptoms of ill heart (Edwards, Baglioni & Cooper, 1990). Observing actual examples from case studies across a wide range of organizations, one may notice that there is evidence to support all kinds and combinations of relationships between factors in the four categories. On the easier side stressful events, coping methods and personality factors may directly influence stress symptoms (e.g. the first two by increasing it and the third by decreasing it). Obviously things are far from being that simple in most of the cases. Seven types of possible models of relationships (linear and non-linear) between the four have been formulated, with the Type-A Behavioral Pattern chosen to represent the personality factors category. A multi-sample test of the seven alternative models has revealed data support for only three of them (Edwards et al., 1990). Those

were: (a) the direct effects model stating that stressful events, Type-A and coping directly influence symptoms as stated above, (b) the mediated effects model which assumes that stress not only directly determines functions but also activates coping and in some cases Type-A which in turn influence symptoms and (c) the mediating mediated effect model states that Type-A mediates stressful events and coping while the latter, in its turn mediates the relationship between stress and symptoms which are also directly influenced by stress.

The accent is placed once again on the importance of understanding the workings of the Type-A Behavioral Pattern within the organizational context with both scholar and consultant trying to get a better grasp on the work stress phenomenology. Significant attention has been paid to studies searching for a connection between the presence of the TABP and isolated aspects of personal stress (Kushnir & Melamed, 1991; Jamal, 1990) or occupational stress in general (Evans & Palsane, 1987).

Type A

Initially Type-A was theorized by its authors as being a type of personality, formed from several specific traits that were documented as being directly related to the presence of the Coronary Heart Disease (Rosenman et al., 1975). During the past two decades doctors have felt the need to re-conceptualize the Type-A and focus more on its anger and hostility components so that it would better predict the CHD (Rose, 1987). Nevertheless, the initial definition treating Type-A as a behavioral pattern characterized by vigorous verbal and psychomotor mannerisms, a chronic sense of time urgency, easily aroused anger and hostility, enhanced competitiveness, extreme impatience, and aggressive achievement (Jenkins, Zyzanski, & Rosenman, 1978) was borrowed by work psychologists and used in organizational studies. Thus TABP describes persons living a general stressful lifestyle with a serious hostility tendency, hard-driving, and continuously under time pressure.

In this general context the local Romanian research focused on work stress phenomenology has also gained weight in the past decade. For example the relationship between the TABP and work stress has been investigated by Pitariu, Miclea & Munteanu in 1987 on female managers. Furthermore the actual relationship between the work and family environment was scrutinized in the effort

to formulate a model to contain not only organizational demands but also strains coming from family life (Pitariu et al., 2004). Also, managers' concern for the employees well being is evermore serious and involve not only pure professionals within the HR and management consultancy areas, but also academics specialized in the field. In the same time important international psychometric instruments that may be used in the field have been adapted and normed on Romanian population. We consider that it is important to use every possible opportunity to analyze data gathered from real life situations, in organizations actually going through diagnosis processes. In such a context we have obtained data allowing us to check if there is a relationship between aspects of work stress and the characteristics specific to TABP. We have also checked if there is a difference in work stress measurements between the high Type A and Type B individuals.

METHOD

Participants

Measures of stress and TABP were gathered from an organization, to which we will refer from now on as ALPHA, active within the private sector activating in the Media & Communication industry. The data was gathered during a more complex program of organizational diagnosis, consisting of longitudinal measurements on several organizational dimensions reaching over a time span of more than 3 years. Unfortunately the most recent measurement is the only one for which we have gathered data with the two instruments; as a consequence, no time series are available.

ALPHA is one of the top companies in this field and has grown rather explosively during the last three years. Among the elements specific to the industry where ALPHA functions we need to mention: (a) existence of very competitive work environment, both intra and extra organizational, (b) huge amounts of

pressure placed by both internal and external forces upon the employees for meeting strict and (sometimes) unreasonable deadlines, (c) a constant organizational need to be extremely flexible in terms of the competences, personnel and time allocated to each project and (d) difficult management of a highly sensitive relationship with exigent business partners. Needless to say, we expected these problems to be reflected by our measurements not only when assessing stress, but also when evaluating the Type-A / Type-B ratio for the employee work styles.

A paper and pencil version of the questionnaires for both ASSET and SWS was given to each of all 125 members of the organization.

From various external reasons the final valid set of parallel data consisted only of N=109 entries. From this sample 58 (53%) were females and 51 (47%) males. Average age of the participants: 29.7 years old ($\sigma=5.79$). Marital status: 50 (46%) participants were married, 32 (29%) are living with partner and 27 are single (25%). Education level: 14 (13%) high school graduate, 60 (55%) university graduate and 35 (32%) post university graduate.

Measures

A Shortened Stress Evaluation Tool (ASSET)

Occupational stress was measured with the Romanian version of ASSET (A Shortened Stress Evaluation Tool) developed by Cooper & Cartwright in 2002. Worldwide, the instrument is used extensively by organizational consultants to measure stress and as a basis for the implementation of stress resilience techniques. The design of ASSET is based upon a theoretical model summarized in Figure 1. The model is different through the fact that it recognizes factors such as overall job satisfaction and organizational commitment as having a potential dual function, both as results and sources of stress (Cooper & Cartwright, 2002).

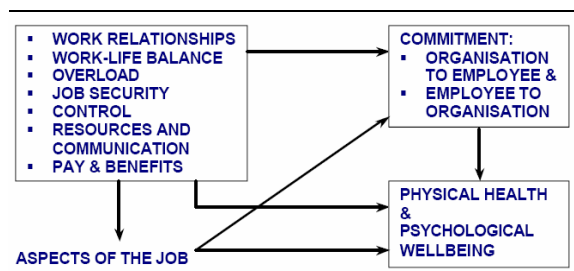


Figure 1. Theoretical model founding the ASSET (From: Asset Management Guide, Cooper & Cartwright, 2002)

ASSET measures three major dimensions of work stress. First, the Perceptions of the job dimension, measured by 37 items, comprises scales for Work relationships, Work-life balance, Overload, Job security, Control, Resources & communication, Pay & benefits, Aspects of the Job, all except the last considered to be exclusively sources of stress. Second, the Attitudes toward organization dimension, measured by 9 items, evaluates the Perceived commitment of organization to employee and the Perceived commitment of employee to organization, both regarded as effects of the stress. Third, a dimension of Personal health, measured through 23 items, is surveyed through the scales for Psychological wellbeing and Physical health also regarded as effects of stress. ASSET also uses 31 items to gather biographical data from the individuals. This data aims to allow consultants to better understand the specifics of the measured organization. For the original version of the instrument, reliability measurements on all the scales were very good; all but two of the scales returning Guttman split-half coefficients (λ_4) in excess of .70. For the Romanian version of the questionnaire equally good reliability coefficients were obtained, with a .70 median for all split half coefficients.

Survey of Work Styles (SWS)

The Type-A Behavioral Pattern was measured with the Romanian version of SWS (Survey of Work Styles) developed by Jackson and Gray in 1988. The SWS was developed in an attempt to meet the need for a brief, multidimensional self-report measure of the TABP with sound psychometric properties compared to other existing measures (Jackson & Gray, 1993). SWS is a multidimensional measure comprising 96 items that are all actually describing the Type-A behavior. It has been developed using the classic approach of test construction by building the items to directly reflect the detailed theoretical structure of the measured construct. The SWS has been found to have much better predictive validity than both the Jenkins Activity Survey and the Framingham Type-A Scale, as well as much better concurrent validity with the Rosenman Structured Interview". It consists of six subscales, each containing 16 unique items. The subscales are labeled Impatience, Anger, Work Involvement, Time Urgency, Job Dissatisfaction, and Competitiveness. As one may see the instrument also has the great

advantage of being tailored to the work environment and not a general TABP measure. Measured alpha reliability coefficients for the original normative sample were all higher than .73. For the Romanian version of the SWS questionnaire, almost equally good alpha values were returned with all the subscales scoring between a minimum of .64 and a maximum of .83 with a .72 median, on the general normative sample.

RESULTS AND DISCUSSION

To identify the general relationships between work stress and Type-A scales we have used Pearson correlation on the two sets of measured dimensions. The results are shown in Table 1.

At a first glance we notice an important number of expected relationships between some of the scales but, in the same time, we track down a number of somehow surprising correlations. As a general conclusion the values for the correlation coefficients are not very high, thus indicating medium and, in the best cases fairly strong relationships, but many of them are significant to our test.

Not surprisingly, there are significant correlations between *Impatience*, describing the Type-A tendency to be highly intolerant to all delays hindering individuals from attaining their purpose, and many of the work stress dimensions. Among these we notice:

1. A medium correlation, $r(107) = .28$, $p < 0.01$, with the Work-life balance indicating that a personal style fixed on not tolerating any kind of time obstacles is related to the individual stress generated by perceptions of the individual that time spent at work seriously affects their personal life.
2. A medium correlation, $r(107) = .31$, $p < 0.01$, with the Psychological wellbeing as symptom of work stress suggesting that impatient individuals also tend to have a permanent and supplementary sense of psychological unbalance vaguely reaching towards borderline discomfort.
3. A rather weak but interesting correlation, $r(107) = .25$, $p < 0.01$, with Resources & Communication suggesting that impatient individuals also have a supplementary sense that they lack the resources needed to perform their job – in this case we may speculate that Type-As constantly feel that achievement of their own

objectives is too dependent on others doing their tasks in time.

Anger, describing the Type-A individuals' propensity to become antagonized, emotionally excited, and feeling a rather strong desire or intent to punish or seek revenge, displays, among others, two interesting significant correlations:

1. A negative relationship, $r(107) = -.26$, $p < 0.01$, with the perceived commitment of the employee to the organization, suggesting that low levels of personal involvement induced by stress might also be associated with individuals that have a natural tendency to seek animosity and confrontation.
2. A surprisingly and fairly strong correlation, $r(107) = .35$, $p < 0.01$, with psychological wellbeing as an effect of work stress might lead us to speculate that Type-A individuals with a predisposition towards controversy might actually use this behavior to

reach a personal psychological balance by projecting their own anger on others; this might be a phenomenon specific to the organizational environment that tends to encourage constant challenging of others ideas as a way of life.

Not surprisingly, *Work Involvement*, the Type-A is getting too much involved in its work up to the level where social or other recreational activities are neglected. This correlates, $r(107) = .27$, $p < 0.01$, at a medium but significant level with the perceived commitment of the employee towards the organization as a work stress effect suggesting that individuals that are, by personality too work involved will tend to show an increased perception of their own involvement in the organizational life when under the influence of other stressors.

Table 1
Correlations between measured dimensions (N=109)

	Impatience	Anger	Work involvement	Time urgency	Job dissatisfaction	Competitiveness
Work relationships					0,541**	
Work-life balance	0,288**	0,239*		0,417**	0,208*	0,216*
Overload	0,236*		0,190*	0,489**	0,371**	
Job security					0,434**	
Control	0,205*			0,188*	0,635**	
Resources & communication	0,255**			0,221*	0,563**	
Pay & benefits	0,209*	0,208*		0,237*	0,488**	
Aspects of the job	0,216*			0,235*	0,472**	
Commitment of org. to emp.		-0,245*			-0,564**	
Commitment of emp. to org.		-0,265**	0,278**		-0,400**	
Psychological wellbeing	0,315**	0,355**	0,233*	0,280**	0,217*	
Physical health	0,214*	0,209*				

** Correlation is significant at the $p < 0.01$ level

* Correlation is significant at the $p < 0.05$ level

Empty spaces show insignificant correlations

The *Time Urgency* dimension, defines the Type-As excessive preoccupation with work deadlines and similar pressures, resulting in hurried, abrupt motor mannerisms and style. The most relevant correlations of this aspect with work stress dimensions are the following:

1. A fairly strong positive relationship, $r(107) = .41$, $p < 0.01$, with Work-Life balance indicating that individuals that have a high time urgency will also tend to display high work stress levels induced by the fact that they will

permanently prioritize work issues over personal ones and in the same time be aware of that.

2. An even stronger positive and expected correlation, $r(107) = .48$, $p < 0.01$, with Overload explains that the personal style focused on deadlines specific to these Type-As will most probably act as an amplifier, not only making the individual feel more overloaded but also highly stressed.
3. A rather weak but significant correlation, $r(107) = .28$, $p < 0.01$, also exists with the psychological wellbeing; we consider this result to be highly specific to the organization we have measured where constant pressure under deadlines is a "way of life" considered by many to be normality, thus not negatively affecting the sense of personal psychological comfort.

Type-A *Job dissatisfaction* is regarded as the absence of a positive emotional state resulting from the appraisal of one's job dimensions. Among these dimensions we mention satisfaction with the peers and coworkers professional and interpersonal competence, supervisory styles, physical working conditions, recognition or opportunities for promotion. Bearing that in mind, it is no surprise that this dimension positively correlates with all the measured work stressors and most of the work stress effects. The strongest relationship, $r(107) = .63$, $p < 0.01$, functions between Job dissatisfaction and Control dimensions. This suggests that Type-As that have a tendency to be discontent with everything related to their job, actually have

most of their focus on the feeling of lack of control over their own work environment, the latter being the strongest of all the elements generating stress.

Competitiveness is defined as a Type-A tendency to struggle to defeat others in their strife for recognition, manifested even in noncompetitive situations. We notice a single significant correlation, though rather weak, $r(107) = .21$, $p < 0.01$ between competitiveness and work life balance indicating that individuals with this pattern of behavior tend to be more stressed, having the sense that the normal equilibrium between their work and family life has been spoiled.

To see if there are any significant differences at sample level, between the measurements of work stress dimensions for Type-A and Type-B behavioral patterns we have compared the mean values for all of the work stress scales specific to extreme Type As and Extreme Type-Bs (that is the first 25 individuals with the highest and the lowest SWS scores), performing t test to check for the significance of the mean differences. The results are displayed in Table 2.

The first conclusion to be drawn here is that the smallest and not significant differences that may be noticed between the two samples exist in the cases of the Job security and Pay and benefits. In other words from a work stress perspective in the tested organization there seems to be no difference between TABP and TBBP individuals in terms of perceiving job security as a threatening issue affecting stress and in terms of satisfaction with the pay and benefits. Actually both those issues are clearly settled by the management periodically.

Table 2
Differences between the stress levels of Type-A and Type-B (N=25)

	TYPE A MEAN	TYPE B MEAN	MEANS DIFFERENCE
Work relationships	20,92	17,16	3,76**
Work-life balance	12,53	8,56	3,97**
Overload	12,53	8,68	3,85**
Job security	8,72	7,72	1,00
Control	12,08	10,16	1,92*
Resources & communication	10,17	7,92	2,25**
Pay & benefits	3,64	2,64	1,00
Aspects of the job	19,56	16,96	2,60**
Commitment of org. to emp.	22,44	25,56	-3,12**
Commitment of emp. to org.	18,17	19,88	-1,71*
Psychological wellbeing	22,75	15,52	7,23**
Physical health	12,58	9,84	2,74**

All other differences measured on stressor dimensions are not only significant but provide solid base toward the conclusion that Type-As tend to display more work stress than Type-Bs. The highest difference between the two groups has to be noted in the case of Psychological wellbeing. This means that Type-As tend to significantly have more problems along that line in a sense that (a) they not only perceive all other stressors at higher levels but (b) they even contribute, through their own behavioral style, to the amplification of those stressors. All those cause the Type-As to feel more psychological discomfort in front of work stress adversity as compared to the Type-Bs.

The negative differences observed for the Attitude toward organization subscales come to confirm that Type-Bs tend to be more involved in their relationship with the organization and in the same time perceive the organizational involvement towards them as being higher than the Type-As. From this reason the two perceptions have a higher chance to manifest as effects of work stress in the case on Type-Bs rather than the Type-As.

CONCLUSIONS

From a general perspective the most important conclusion to be drawn from the study is that some of the dimensions specific to TABP have a rather strong connection to many of the occupational stress dimensions: Time Urgency, Impatience and specially Job Dissatisfaction correlate strongly with stress coming from Work relationships, Work-life balance, Overload, Job security, Control, Resources & communication and Pay & benefits. On the other hand Anger correlates not with stressors but with dimensions usually considered to be effects of the stress like Perceived involvement on both vectors of the employee – organization relationship and Psychological wellbeing as well as Physical health.

In the same time Competitiveness and Work involvement do not show or show very little significant correlation with work stress dimensions.

An overlook of the data gathered and analyzed here quickly pushes towards a rather dichotomist conclusion about the study.

On one hand the results are useful in reinforcing some of the ideas speculated and tested in other demarches but with the perspective of modern new instruments like ASSET and SWS. There seems to be a

constant and strong relationship between some of the Type-A dimensions like Impatience, Time Urgency, Job Dissatisfaction and most of the common stressors as well as, and most important, Psychological wellbeing. In the same time clear differences between work stress levels measured for Type-Bs and Type-As are also revealed with the latter generally feeling higher levels of stress. Again the strongest difference indicates Psychological Wellbeing as being the Type-As weakest point.

On the other hand, once again, we need to underline that some of the observed relationships seem to be rather peculiar and may only be explained through a rationale that involves elements highly *specific to this organization*, or in the best case to this domain of the private sector. That, combined with the rather small sample size seems to form an important obstacle stopping the generalization of these results. Unlike TABP which is an individual trait and therefore is generally not dependent to the organizational environment, many of the stress dimensions are highly contextual being dependent on certain organizational structures that often differ from one domain to other, or across industries.

Being restrained by both time and financial resources we have not been able so far to gather valid parallel sets of data similar to the ones analyzed here but bigger in size and following a certain distribution of the organization across the entire range of activities, sizes and ownership. Nevertheless we feel that this demarche is one of the necessary and, unfortunately, only possible small steps that need to be taken for better understanding the stress arena and being able at some point to formulate a clear cut general model explaining all the intricate ties of the occupational stress.

REFERENCES

- Beehr, T. A., & Franz, T. M. (1987). The current debate about the meaning of job stress. In J. M. Ivancevich and D. C. Ganster (Eds.), *Job stress from theory to suggestion*. New York: Haworth Press.
- Cooper, C. L., & Cartwright, S. (2002). *ASSET Management Guide*. Robertson Cooper Ltd.
- Edwards, J. R., Baglioni, A. J. Jr., & Cooper, C. L. (1990). Stress, Type-A, Coping, and Psychological and Physiological Symptoms: A Multi-Sample Test of Alternative Models. *Human Relations*, 43, 10, 919-956.

- Evans, G. W., Palsane, M. N., & Carrere S. (1987). Type-A Behavior and Occupational Stress. *Journal of Personality and Social Psychology*, 52, 5, 1002-1007.
- Humphrey, J.H. (1998). *Job Stress*. Needman Heights, MA: Allyn & Bacon.
- Jackson, D. N., & Gray, A. M. (1993). *Survey of Work Styles Manual*. Research Edition II. London: Research Psychology Press.
- Jamal, M. (1987). Relationship of Job Stress and Type-A Behavior to Employees' Job Satisfaction, Organizational Commitment, Psychosomatic Health Problems and Turnover Motivation. *Human Relations*, 43, 8, 727-738.
- NIOSH - Sauter, S., Murphy, L., Colligan, M., Hurrell, J., Scharf, F., Sinclair, R., Grubb, Goldenhar, L., Alterman, T., Johnston, J., Hamilton, A., Tisdale, J. (1999). *Stress at work*. <http://www.cdc.gov/niosh/stresswk.html>
- Kushnir, T., & Melamed, S. (1991). Work-Load, Perceived Control and Psychological Distress in Type A/B Industrial Workers. *Journal of Organizational Behavior*, 12, 2, 155-169.
- Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal and coping*. New York: Springer.
- Pitariu, H., Miclea, & M., Munteanu, I. (1987). Tipul A de comportament și stresul profesional la personalul muncitor feminin cu funcții de conducere, *Revista de Psihologie*, 33, 4, 303-310.
- Pitariu, H., Spector, P. , Poelmans, S., O'Driscoll, M., Cooper, C., Allen, T., Lapierre ,L., Sanchez J., Pitariu, A. (2004). Conflictul muncă-familie la managerii din Romania. Un studiu corelațional, *Psihologia Resurselor Umane*, 2, 2, 16-23.
- Rosenman, R. H., Brand, R. J., Jenkins, C. D., Friedman, M., Straus, R., & Wurm, M. (1975). Coronary heart disease in the Western Collaborative Group Study: Final follow up experience of 8 1/2 years. *Journal of the American Medical Association*, 233, 872-877.
- Rose, M. I. (1987). Type A Behavior Pattern: A concept Revisited. *Canadian Medical Association Journal*, 136, 345-350.