

**ПСИХИЧНОТО БЛАГОПОЛУЧИЕ НА ЧОВЕКА –
ФАКТОРИ НА ВЛИЯНИЕ
ЛИЧНОСТ И СОЦИАЛНА СРЕДА**

ПСИХОЛОГИЧНИ ИЗСЛЕДВАНИЯ

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**МЕДИАТОРЕН МОДЕЛ ЗА ВЛИЯНИЕ НА
ОЦЕНКИТЕ ЗА ОРГАНИЗАЦИОННАТА
СРЕДА ВЪРХУ ДЕПРЕСИЯТА**

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Резюме: *Разкриват се механизмите на влияние на оценките за организационната среда върху кумулирането на стрес (вторичната оценка за непредсказуемост, отсъствие на контрол и претовареност в по-продължителен период) и депресията. С извадка от 255 служители от различни организации е проверена хипотезата за влияние на оценките за средата върху депресията, през медиатор кумулирания стрес. Разкрити са медиатирани влияния върху депресията на оценки свързани преди всичко с организационното и функционално състояние на средата. Показана е особена връзка на престижа на организацията и депресията.*

Ключови думи: психичен стрес; депресия; медиатор; оценки за средата.

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**MEDIATION MODEL FOR INFLUENCE
OF THE ASSESSMENTS OF THE ORGANIZATIONAL
ENVIRONMENT ON DEPRESSION**

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Abstract. *This study presents the mechanism of influence of the assessments of the organizational environment on stress accumulation (the secondary assessment of unpredictability, lack of control and overload for a longer period of time) and depression. The hypothesis for influence of the assessments of the organizational environment on depression, through mediator accumulated stress, was verified with a sample of 255 employees from various organizations. Mediated influences of the assessments of the organizational environment on depression were found. These assessments are related to the organizational and functional state of the environment. The special relationship between the organization's prestige and employee depression is shown.*

Keywords: stress; depression; mediator; environment assessments.

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Contribution:

Valeri Stoyanov – Introduction, Theoretical background, Methodology, Results & Discussion, Conclusions.

Rositsa Ikonomova – Abstract, Data processing and graphics, Results & Discussion, References.

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INTRODUCTION

Transactional theory is one of the most widespread concepts for psychological stress. When analyzing psychological stress we start from analyzing both the characteristics of the individual and the situation. According to R. Lazarus and S. Folkman, stress includes transactional relationships between the individual and the environment in which the individual exists (Lazarus 1966; Lazarus, Folkman 1984; Lazarus 1991; Lazarus 1993; Lazarus 1999). Stress creates environment, which is perceived by the individual as a tough, complicated, consuming the resources and threatening the well-being. Such a theoretical position focuses on cognitive assessment not only of the requirements of the environment, but also of the individual resources and coping capabilities. This concept is widely used in empirical research in organizational environment. It is a methodological base also for the present empirical study.

The aim of the present study is to check how the assessments of the organizational environment influence the accumulation of stress and depression as stress effect, as well as what is the nature of the interactions between the assessments of the organizational environment, accumulated stress and depression.

We will test *the hypothesis for mediation influences* of the assessments of the social environment on depression through mediator accumulated stress.

Subjects of the study are 255 employees, divided in five categories (Table 1).

The first category includes teachers from secondary schools in the region of Varna city. The second category consists of employees occupying sales consultant positions or employees providing customer service behind a desk while working with money. They are indicated as front-office employees. The third category contains employees who are occupied with physical work, operating with machines and equipment to achieve the organizational goals. This group of subjects is operationalized as operators of technical systems. They are operators of metal cutting machines and processing machines, they control certain technology processes related to production of parts and assemblies. The fourth category of employees is line managers. They work in middle and large companies and are responsible for a brigade, industrial unit or a team. The fifth category encompasses the so called municipal and state officials. The subjects work at municipalities within the region of Varna city and the regional administration of Varna.

The following *instruments for psychological measurement* are used:

1) *Questionnaire for perceived stress – PS-1*. The questionnaire consists of 14 items. It measures the extent to which subjects evaluate events in their lives as stressful during the last month. The evaluation relates mainly to perceptions of unpredictability, lack of control and overload (Rusinova – Hristova, Karastoyanov 2000). It may be assumed that this is the cumulated stress during the last month. Cronbach's alpha for the present study is 0,891.

TABLE 1
DISTRIBUTION OF THE SUBJECTS BY POSITION

Position	Number of subjects	Percentage of the total sample
Teachers from secondary schools	52	20,4
Employees from front-offices	41	16,1
Operators of technical systems	54	21,2
Line managers	48	18,8
Municipal and state officials	60	23,5
Total	255	100.0

2) *Questionnaire for assessment of the social environment*. The questionnaire is based on the traditional methods applied to diagnose the subjective perception of the organizational environment, indicated with the term „mental climate“ (Velichkov, Radoslavova: 77-88). The questionnaire includes characteristics inherent in the three separate dimensions which stem from the approach of environmental psychology. The questionnaire consists of 50 features which are used to describe the dimensions of the environment. The subjects assess this environment using 5-point scale with values from 1 – not true at all, to 5 – absolutely true.

The *first dimension* refers to the statements about organizational and functional state of the environment in the following three scales: *Normative base* (Cronbach's alpha is 0,743), *Rigidity of the order* (Cronbach's alpha is 0,726), *Contradictiveness* (Cronbach's alpha is 0,675).

The *second dimension* refers to the relation between the particular environment and the broad social context. It is represented by the following scales: *Accessibility* (Cronbach's alpha is 0,644), *Prestige* (Cronbach's alpha is 0,822), *Isolation* (Cronbach's alpha is 0,668).

The *third dimension*, the relation between the environment and the individuals in it, includes the following scales: *Load* (Cronbach's alpha is 0,731), *Satisfaction* (Cronbach's alpha is 0,717), *Involvement* (Cronbach's alpha is 0,558), *Protectiveness* (Cronbach's alpha is 0,799).

The scales show satisfactory internal consistency and are applicable for analyses in the present study. Only the scale *Involvement* could be considered on the borderline of the modest reliability and therefore the results related to it should be interpreted with caution. It is assumed that Cronbach's alpha should be $\geq 0,600$, so that the result of the scale is reliable enough. Above 0,700 the internal consistency of the scale is assumed to be good enough for practical purposes (Dzhonev 2004: 47).

3) *Questionnaire for neurotic tendencies and personality characteristics*. The questionnaire is created by A. Kokoshkarova (Koko-

shkarova 1976; Kokoshkarova 1984) It contains 120 statements divided into 13 scales, one of which is the social desirability scale. Its composition is close to the short form of MMPI, the so-called short psychopathological questionnaire. The method is suitable for screening studies and allows the identification of neurotic and neurosis-like disorders and the related dynamics of the personality traits. The questionnaire is standardized with a group of mentally healthy subjects.

In the present analysis only the results from the scale *Depression* are used. It reveals a state of low spirits, mental breakdown, discouragement, pessimism, personality exhaustion. The scale shows a good consistent reliability in this study. Cronbach's alpha is 0,734.

The Statistical Package for Social Sciences (SPSS 20) was used to conduct all statistical tests.

RESULTS AND DISCUSSION

The mediation hypothesis could be verified only for the assessments (as predictors) that correlate significantly with the probable mediator – accumulated stress. The presence of correlation implies that the predictor influences the mediator. In the present study the accumulated stress does not correlate significantly with two of the scales – *Isolation* and *Involvement* (see Table 2) and the mediation hypothesis for these two assessments will not be verified.

The mediation hypothesis is verified by systems of regression equations (Mac Kinnon, Fairchild 2009). In the first equation accumulated stress is regressed on the environmental assessments – result A (see fig. 1, 2, 3, 4), in the second equation depression is regressed on the environmental assessments – results B and in the third equation depression is regressed on the accumulated stress and environmental assessments – results C and D. When we control the path *environmental assessment – accumulated stress – depression*, the path of influence *environmental assessment – stress effect* is insignificant (compare results B and D). For example, on Fig 1 result D is statistically insignificant, which means

TABLE 2
CORRELATIONS BETWEEN ASSESSMENTS OF THE SOCIAL ENVIRONMENT
AND ACCUMULATED STRESS

Assessments of the social environment	Accumulated stress
Normative base	-0,201(**)
Rigidity of the order	-0,153(*)
Accessibility	0,149(*)
Prestige	-0,251(**)
Isolation	0,110
Load	0,211(**)
Satisfaction	-0,167(**)
Involvement	0,115
Protectiveness	-0,250(**)
Contradictiveness	0,255(**)

* Correlations are significant at level $p < 0,05$.

** Correlations are significant at level $p < 0,01$.

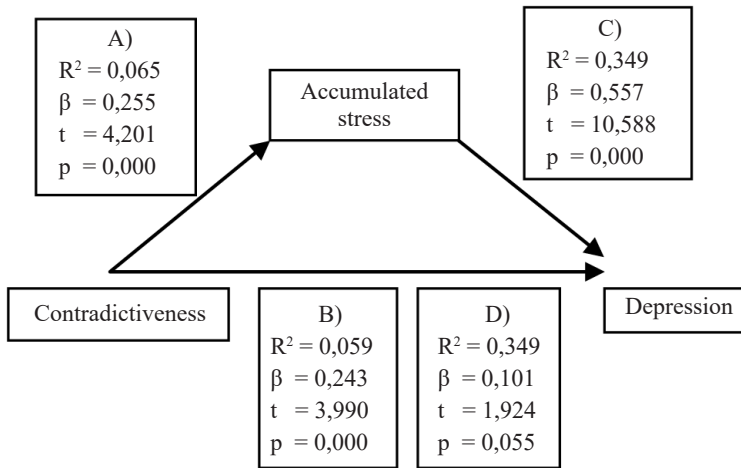


FIGURE 1. RESULTS FROM REGRESSION EQUATIONS FOR VERIFYING THE MEDIATION MODEL FOR INFLUENCE OF THE ASSESSMENT CONTRADICTIONNESS THROUGH MEDIATOR ACCUMULATED STRESS ON DEPRESSION

that *Rigidity of the order* doesn't influence depression directly but through accumulated stress. To reduce depression we should manipulate the mediator. In this case this is the accumulated stress. The best demonstration of the mediation model is demonstrated when

we get zero influence of the independent variable on the dependent one in result D, while the mediator keeps its significant influence on the dependent variable. Otherwise there is a remaining direct influence of the independent variable on the dependent one.

The mediation hypothesis was proven for the following assessments of the social environment: *Contradictiveness*, *Rigidity of the order*, *Load* and *Prestige*.

Results can be interpreted as follows. On Fig. 1 it is visible from the results (A) that with the increase of the contradictory and conflicting requirements of the organization increases also the level of accumulated stress, which in turn leads to higher levels of depression. The influence of the assessments for contradictiveness of the environment influences the depression through the mediator accumulated stress. The results in the equation D show that with regressing depression on accumulated stress and the results from the scale *Contradictiveness*, remaining influence of *Contradictiveness* on depression is observed.

Results on Fig. 2 show that the clearer the rules for behaviour in the organization (scale *Rigidity of the order*) and the more transparent and stricter the control in following them, the lower the levels of accumulated stress, which means lower levels of depression. On the contrary – the unclear rules and neglected control in following the rules leads to increase in the levels of accumulated stress and from there – to higher levels of depression. When regressing depression on accumulated stress and the results from the scale *Rigidity of the*

order, the interaction between depression and the assessment becomes statistically insignificant (result D). This means that the influence of the assessment is mediated by accumulated stress, part of the variances of which is caused exactly by this assessment.

The necessity to waste personal resources for achieving organizational goals (scale *Load*) leads to increase in the levels of accumulated stress, and from there – to increase in the levels of depression (Fig. 3).

This is so because when we regress depression on accumulated stress and the scale *Load*, the interaction between the assessment operationalized in this scale and depression is not statistically significant anymore (result D). The influence of the assessment is through the mediator accumulated stress.

There is also a confirmation of the mediation hypothesis in regard to the assessment of the social environment, indicated in the result for the scale *Prestige*.

Forming and maintaining positive self-image by being part of an organization (see. Fig. 4) leads to reduction of the accumulated stress, which in turn reduces the levels of depression. The opposite – the perception that the organization is not prestigious and being part of it does not lead to maintenance of a positive personal image, leads to increase of

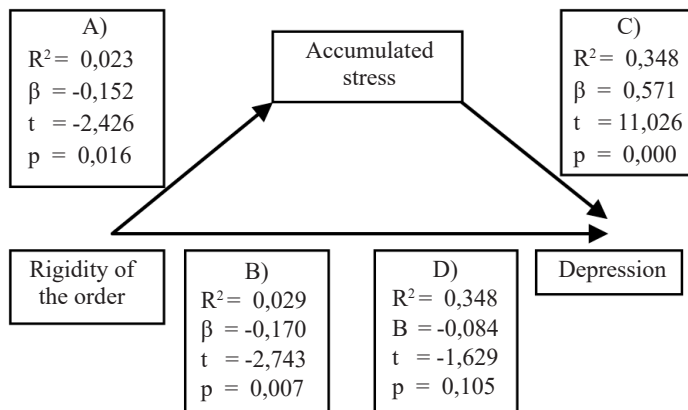


FIGURE 2. RESULTS FROM REGRESSION EQUATIONS FOR VERIFYING THE MEDIATION MODEL FOR INFLUENCE OF THE ENVIRONMENTAL ASSESSMENT RIGIDITY OF THE ORDER THROUGH MEDIATOR ACCUMULATED STRESS ON DEPRESSION

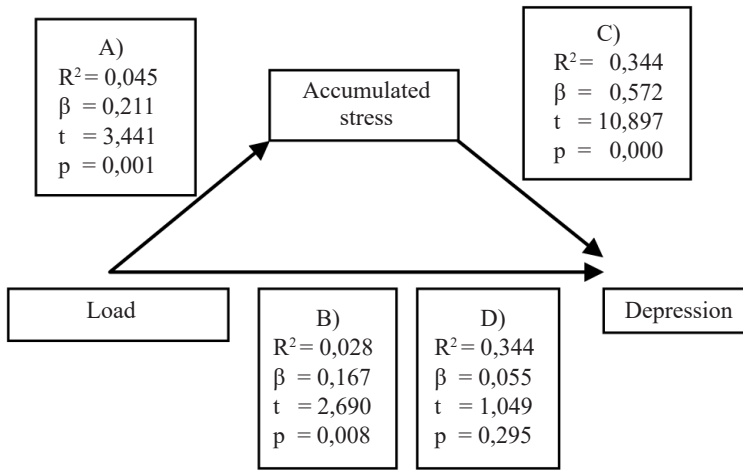


FIGURE 3. RESULTS FROM REGRESSION EQUATIONS FOR VERIFYING THE MEDIATION MODEL FOR INFLUENCE OF THE ENVIRONMENTAL ASSESSMENT LOAD THROUGH MEDIATOR ACCUMULATED STRESS ON DEPRESSION

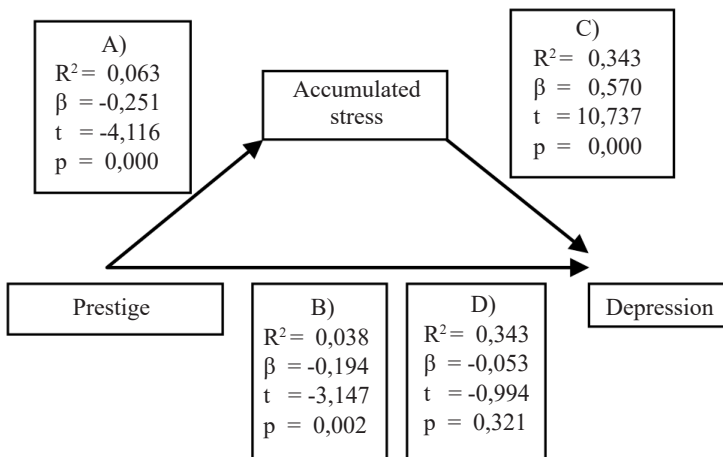


FIGURE 4. RESULTS FROM REGRESSION EQUATIONS FOR VERIFYING THE MEDIATION MODEL FOR INFLUENCE OF THE ENVIRONMENTAL ASSESSMENT PRESTIGE THROUGH MEDIATOR ACCUMULATED STRESS ON DEPRESSION

the accumulated stress and respectively to an increase in depressive experiences by the employees.

Three of the scales of the method for assessing the social environment – *Accessibility*, *Satisfaction* and *Protectiveness* do not have significant correlational interactions with depression and do not have influence on it.

There are independent influences of the assessments of the environment on depression and the inclusion of accumulated stress in the interaction (when checking the mediation hypothesis) does not change the character of the influence of the assessment on depression. Scale *Normative base* has independent influence on depression and this influence is

not mediated by accumulated stress. When verifying the mediation model in the regression equation with accumulated stress, the indicated scale keeps its statistically significant influence ($p < 0,05$), and the coefficient *C* is negative.

In other words, the presence of clear instructions and rules for behaviour in the environment, which are used to keep its functions, leads to decrease of depression. The scales *Isolation* ($r = 0,192$, $p < 0,01$) and *Involvement* ($r = 0,243$, $p < 0,01$) have independent influences on depression. In short, the identification of environment in which there are not clear rules for its organizational operation, directly induces depression, as well as environment which is isolated from the broad social environment and being part of it is related to bad fate, i.e. it is not satisfying, but leaving it would lead to even more negative consequences for the individual. This result shows that the specifics of the social-economic situation in state and regional aspect have influence on depression. The presence of work alternatives would lower the levels of depression, regardless of the fact that the current environment is not satisfying. The lack of such alternatives, however, increases depression.

Based on the results from the verification of the mediation hypothesis for influence of the assessments of the environment on depression with mediator accumulated stress, we may conclude that part of the variances in employees' depression is caused by the accumulation of stress by factors which are related to the organizational and functional state of the environment, as well as the relation between the particular environment and the broader social context and the relation between the environment and the individuals in it.

The analyses ultimately show that the legal base for the operation of the organization is the basic reason for induction of depression on one hand (when the rules for the goal are not clear and contradictory). On the other hand, the leadership style causes stress when the managers do not strictly follow the prescribed rules and when there are contradictory and conflicting requirements. Part of the vari-

ances of this stress explains part of the variances in depression among employees.

Important aspect of the organizational operation and the interactions between the organization and the broader social environment is the problem about the prestige of the organization and its authority in the society. This is not just a problem about the effectiveness and efficiency of the organization, but also a problem related to accumulation of stress and induction of depression among employees. Caring about the good image of the organization in society by the management is respectively caring about the psychological well-being of the employees.

The verification of the mediation hypothesis for the influence of the organizational assessments on depression shows that two approaches could be used for lowering the levels of depression caused by organizational stress. One of them is related influencing the mediator *accumulated stress*. This could be accomplished by different programs for optimizing the accumulation of organizational stress – sport, organizational changes, trainings, rehabilitation programs, teambuilding, involving employees in creating programs and strategies for development. The other approach addresses the organizational environment and its operation, i.e. stress predictors. It is related to optimization of the organizational environment in terms of rigidity of the order, creation of simple and understandable rules for operation, elimination of the contradictory rules and requirements, optimization of the load and working towards raising the prestige of the organization.

Such empirical studies are valuable as they give information for specific interrelations and interactions between individual and organizational factors, which “produce” organizational stress, as well as the potential approaches for its minimization and management.

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