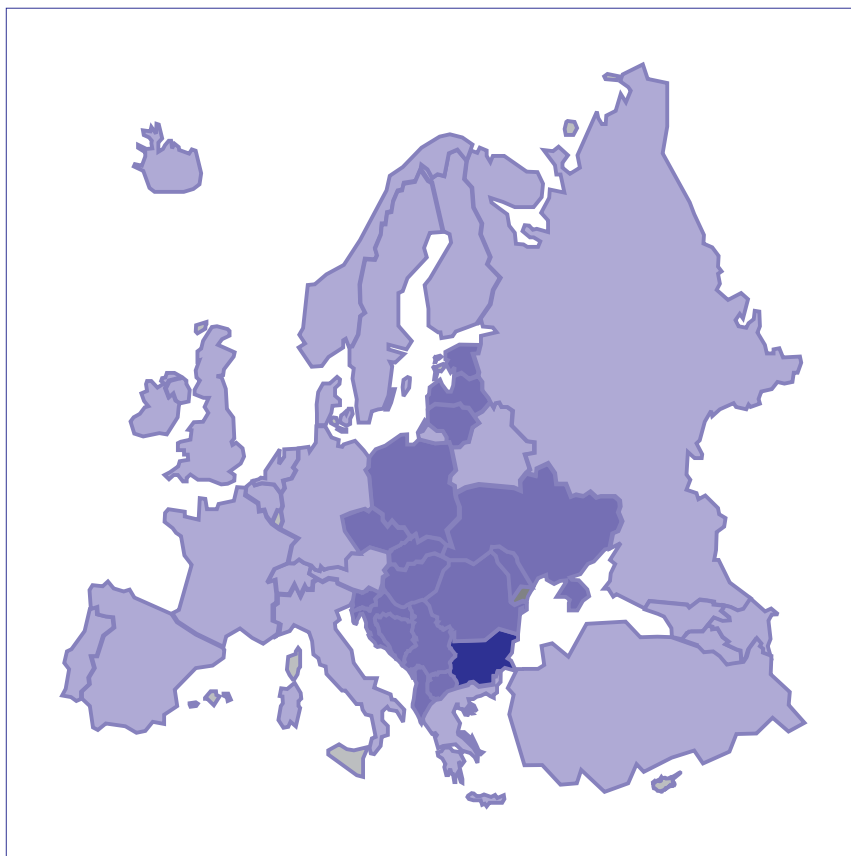


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Work Stress in the Context of Transition

A Case Study of Three Public Sectors in Bulgaria

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Work Stress in the Context of Transition

A Case Study of Education, Health
and Public Administration in Bulgaria

by

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Preface

This publication is part of a series of Reports of the ILO Subregional Office for Central and Eastern Europe that first appeared in 1994, relating to specific areas of social and labour policy.

It is the result of research undertaken by the Institute for Social and Trade Union Research (ISTUR) of the Confederation of Independent Trade Unions in Bulgaria in 2002 in the three sectors of education, health and public administration.

The paper examines work-related stress in the context of political and economic transformation – the factors leading to stress, its symptoms and signs, and how workers are coping with stress. This is a pilot effort of trade unions in Central and Eastern Europe to raise public awareness and to develop a trade union response to stress at the workplace.

So far, stress at work has been a neglected area of policy intervention in most transition countries. Against the background of high levels of unemployment and low wages, occupational safety and health in general, and stress in particular have not received the attention they deserve, from either individuals or institutions. However, the high costs that individuals, management, the community and society pay for stress-related disorders are becoming increasingly evident, and call for concerted action.

With this publication, we hope to initiate or broaden understanding on this important issue, and to stimulate governments and the social partners to look at the complex web of interaction between work-related stress and contributing factors stemming from the economic and political environment, and to find a coordinated policy response to it.

The results of the research presented in this publication are obviously specific to Bulgaria and the three sectors studied. However, the questionnaire and the

methodology can be easily used by those who have an interest and responsibility for occupational safety and health and stress-related issues in other countries.

This publication came into existence with financial support from the ILO Subregional Office for Central and Eastern Europe and the ILO InFocus Programme on Safe Work. However, the responsibility for the ideas contained in it rest with the authors of the paper.

We would like to express special acknowledgements to Dr Zheljasko Hristov, President of the Confederation of Independent Trade Unions in Bulgaria, for his support and guidance of the research team. Our appreciation goes to the members of the research team: Dr Ljuben Tomev, Darinka Kircheva, Dr Nadezhda Daskalova, Tatiana Mihailova, Violeta Ivanova, Zinaida Naidenova. Special thanks also to Eszter Szabó who prepared the lay-out of the publication.

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1. Stress: Definitions, Evaluation, Effects and Research Experience

Work-related stress is one of the major factors of poor health for workers in Europe. Many researchers define job stress as “the disease of 21st century”. *Stress is a biological process* by which the body attempts to adapt to some challenge by mobilizing its energy, disease fighting and survival responses.

Hans Selye (1974) is one of the pioneers who developed the general adaptation syndrome, or syndrome of biological stress, a model consisting of three stages through which the body passes as it attempts to ward off the effects of environmental stressors: alarm, resistance and exhaustion. Selye defined the physiological mechanisms and the medical consequences of stress on the immune system, gastrointestinal system and adrenal glands. Selye’s theory led to many research studies and approaches defining the components and mechanisms of the stress process and its effects.

It was found that there are also *psychological and perceptual processes* involved in stress reactions. Adverse psychosocial stimuli have the potential to act as stressors and may evoke physiological responses similar to those described by Selye, which in turn can lead to disease if the stress is chronic. *Poor working conditions are defined as adverse psychosocial stimuli*. Several intervening variables (individual characteristics, coping strategies or social support) moderate the link between psychosocial stimuli and disease.

The *psychological approach* conceptualizes work stress in terms of the dynamic interaction between person and environment. Several models based on this approach dominate contemporary stress theory.

The *demand-control-support model* analyses workload in terms of physical and psychological job demands. Job control includes the worker’s abilities and skills for coping with demands and the latitude to decide how a specific task should be accomplished. Job strain depends on the level of demands, on the worker’s decision-making latitude, and on the quality of social support available from management and co-workers.

The *person-environment fit model* allows the evaluation of job satisfaction. There is a lack of fit when the employee’s aptitudes, capabilities and skills do not match

the demands of the job, and when the work environment and work opportunities do not meet the workers' needs and expectations. In both cases, a lack of fit gives rise to the experience of stress corresponding with states of anxiety, depression and low satisfaction.

The *appraisal and coping model* focuses on *cognitive processes* and *emotional reactions* underpinning the person's interaction with their environment. The quality or intensity of the emotional response and the resulting physiological and behavioural changes depend on the cognitive appraisal of the present or anticipated significance of the interaction with the environment or its "threat" to the security and safety of the individual or the individual's ability to cope. The experience of stress results from a person's realization of difficulty in coping with demands and threats to their well-being, and related issues of control and support.

The *effort-reward imbalance model* argues that the experience of chronic stress can be defined in terms of a mismatch between high costs spent and low gains received – such as financial gratification, praise, recognition, status and advancement.

Based on research and on existing models of stress, some definitions of occupational stress have been suggested in contemporary theory, focusing on different aspects:

- *“Job stress can be defined as the harmful physical and emotional responses that occur when the requirements of the job do not match the capabilities, resources, or needs of the worker. Job stress can lead to poor health and even injury.” (Stress at work. United States National Institute of Occupational Safety and Health. Cincinnati, 1999.)*
- *“The emotional, cognitive, behavioural and physiological reaction to aversive and noxious aspects of work, work environments and work organizations. It is a state characterized by high levels of arousal and distress and often by feelings of not coping.” (Guidance on work-related stress: Spice of life – or kiss of death. European Commission, Directorate-General for Employment and Social Affairs. 1999)*
- The WHO defines work stress as every *“state perceived as negative by a group of workers that is accompanied by dysfunctions on a physical, psychological and/or social level and is due to the fact that workers are not able to respond to the requirements and demands imposed by their work situation”*.

Work hazards are both physical and psychosocial. They may affect health through a direct physical pathway and a psychological stress-mediated pathway.

The physical hazards are relatively well known, although information technologies give rise to new hazards. The psychological effects of physical hazards reflect not only their direct action on the brain and their unpleasantness, but also the worker's awareness, suspicion or fear that they are being exposed to harm. It is the latter that can give rise to the experience of stress.

Psychosocial hazards result from an imbalance between various elements of the work system. Contemporary theory outlines ten different categories of potential stressful factors. Six are related to the context of work: organizational culture and function, role in the organization, career development, decision-making latitude or control, interpersonal relationships at work, and the home-work interface. A further four are related to the content of work: work environment and equipment, task design, workload or pace of work, and the work schedule.

An imbalance in these elements may produce a load on the human response mechanisms that evokes adverse psychological and physiological reactions. The human response mechanisms – which include behaviour, physiological reactions and cognition – act to bring the environmental factors that are creating the imbalance under control. These efforts, coupled with an inability to achieve balance, produce an overload on the response mechanisms that leads to mental and physical fatigue. Prolonged exposure and fatigue leads to strain and disease.

A large number of research studies suggest that unhealthy levels of stress cause a variety of disorders and illness. These include a wide spectrum of pathological consequences, ranging from chronic fatigue to depression, and including insomnia, anxiety, migraines, emotional upsets, allergies and the abuse of tobacco and alcohol.

In the longer term, stress can contribute to hypertension, and therefore to the development of heart and cerebrovascular diseases, as well as to peptic ulcers, inflammatory bowel diseases and musculo-skeletal problems. It may also alter immune functions, which may in turn facilitate the development of cancer. Taken together, these disorders are responsible for a great majority of disease, death, disability and consumption of medical care.

The cost of stress is very high for individuals (poor health, accidents, low job satisfaction, health care expenditures), for companies and organizations (poor performance, lack of productivity, absenteeism, medical costs, turnover, even labour conflicts and strikes), and for society (health care costs, loss of intellectual capital, low-level performance and economic competitiveness). Therefore, the design and implementation of stress prevention programmes (primary, secondary and tertiary

prevention) following both the individual and collective approaches must be a major priority for the social partners at the national and organizational levels.¹

¹ As seen from the bibliographical references, no nationwide representative surveys of work stress have been conducted in Bulgaria. Some surveys have been carried out, aimed at establishing the stress profile of specific professions:

- *Teachers* – Tosheva 1993, Deyanov 1995, Tsenova 1996, Tsacheva 1996
- *Physicians* – Deyanov 1995, Petkova 1996
- *Police officers and physicians* (an intercultural comparison) – Rousinova 1998
- *Television employees* – Dincheva 1993, Tosheva 1993

The stress effects of the transition period have been the topic of research for several studies:

- *Stress and Aggression in the Contemporary Social Situation* (Rousinova 1992)
- *Unemployment in Bulgaria: Stress and Coping* (Kotseva 1993, Todorova 1993)
- *The Transition and the Crisis of Values – Value Stress* (Baichinska 1994)

Many other works focus on individual effects, co-relations, and moderators of stress from a psychological or medical point of view.

2. Stress Environment Parameters in Societies in Transition

2.1. Method of Research, Representativeness and Limitations

The present study is a pilot project for Bulgaria, in that work stress was an object of cross-sector research for trade unions for the first time. The study was aimed at providing an in-depth analysis of the specific factors and sources of stress, and the extent to which they have been influenced by the process of transition, with its challenges and high social costs. The findings will be used to develop a framework trade union strategy for stress reduction and stress prevention.

The study covers the three largest and most important sectors funded by the state budget – education, public health and public administration at both the central and local government level. While these sectors are similar in terms of funding sources and activity type (mostly mental work), each of them has specific customers and working conditions. Sector-specific features have been taken into consideration and duly reflected in the formation of the survey questionnaire, which is a uniform instrument.

The planned *sample* of 1026 respondents was distributed equally among the three sectors. In the first stage, the number of clusters was established at 141 (i.e. 47 in each sector), and each cluster included five persons from small towns (municipal centres), seven persons from large towns (regional centres) and 10 persons from the capital city, Sofia. The survey covered 45 cities nationwide over the period 4–22 February 2002. Villages were not covered because in most cases the respective municipal centre services them in terms of education, health care and administrative services. Therefore, for the purposes of this survey the major factor for the establishment of the sample and the clusters was the concentration of service providers and their employees.

The respondents in each cluster were identified through random selection and a payroll-based step (with the exception of employees on annual and sick leave,

and eliminating auxiliary and security personnel with low skill levels). An individual interview was conducted with every person in the sample. The replacement of respondents was permitted only in cases of interview rejection, but for no more than 60% of the original sample.

A total of 97% of the sample respondents were interviewed – i.e. *995 persons*, or an average of seven respondents per cluster. There were 26 questionnaires that remained unanswered because the respondents rejected the interview, and five questionnaires were nullified due to logical contradictions, inaccuracies or scarce and incorrect responses. The respondents identified themselves as belonging to the following areas of activity: 30.8% health care, 34.0% education, and 31.3% public administration.

The *social and demographic profile* of the respondents revealed several significant characteristics. The distribution according to *gender* reflects the profile of the persons employed in the three sectors with a high degree of accuracy, as the female respondents constitute 78.4% of the total. According to statistical data, women account for 79.2% of the total number of employees in these sectors. Apparently these are strongly feminized sectors – particularly education and health care, as well as the lower-level staff of central and local government administration. We should note here that men are much more privileged than women in the hierarchy, in spite of the general female dominance of these activities. Of the interviewed men, 32.2% are in management positions, while the rate is almost half this level in the case of women, at 17.6%. A total of 82.4% of female respondents are in staff positions. These findings mirror the existing social model, which is definitely discriminatory with respect to equal opportunities for professional growth.

The *age* profile of the respondents has the typical pyramid shape, with solid presence in the middle sections and lower density at the two poles. Due to the discrepancy between the interval scales used in the survey and those applied in official statistics, an adequate comparison cannot be made, but the model of the age profile is quite comparable (see table 1).

Table 1.**Age profile of survey respondents and persons employed in the targeted sectors**

Respondents		Employed persons*	
Age	Share in total	Age	Share in total
Below 20	0.2%	Below 24	3.7%
21–30	13.1%	25–34	22.2%
31–40	29.3%	35–44	31.7%
41–50	37.7%	45–54	32.8%
51–60	19.1%	55–64	9.3%
Above 60	0.6%	Above 64	0.3%

*Source: *Employment and Unemployment 3/2001*, NSI.

The *education* profile of the respondents is consistent with the actual educational standards of the persons employed in the three sectors (see table 2). The higher relative share of respondents with university education at the expense of those with primary and elementary education is due to the design of the research and sample, which attempts to cover the most typical professions in the respective sectors – teachers, physicians and nurses, and administrators and experts. These are positions that by their nature require higher educational standards.

Table 2.**Education profile of respondents and persons employed in the targeted sectors**

Respondents		Employed persons*	
Education level	Share in total	Education level	Share in total
University	65.6%	University	57.1%
Secondary	33.7%	Secondary	35.0%
Primary	0.5%	Primary	7.3%
Elementary	0.1%	Elementary	0.6%

*Source: *Employment and Unemployment 3/2001*, NSI.

The quantitative indicators of the survey sample (scope and territorial distribution of the respondents) as well as the similarity of the social and demographic features of the sample with those in the larger population of persons actually employed in the chosen sectors, suggest that the *survey is representative at the*

national level for those working in education, health care, and public administration. When interpreting the findings, however, one should keep in mind the following limitations:

- Data are not representative for the individual sectors or other subgroups, but they can be of use for in-depth qualitative assessments of work stressors and their dependency on the parameters and conditions of transition, which in fact is the main goal of the research.
- Due to the absence of detailed statistical data and reliable monitoring systems in budget-funded organizations (a fact that also applies to the real economic sector in Bulgaria), findings with respect to the *level and cost of stress* should be seen as an evaluation only (see sections 4.1 and 4.5).

2.2. The Impact of Reforms in the Budget-Funded Sector in Bulgaria

One of the major features of the Bulgarian transition is that *reforms in different sectors did not take place at the same speed*. The political changes started in 1989, and were generally completed within one year with the adoption of the Constitution of the Republic of Bulgaria. The economic reform that started at the beginning of 1991 consisted entirely of the liberalization of prices, and led to 473.7% inflation by the end of the same year. The restructuring and privatization of the real sector developed at a slow pace, and took off only after 1997. Over the next three years, 73% of all enterprises were sold. Social reforms were fragmented, and their philosophy was often changed. The national economy became a victim of a vicious cycle: a decline in production, market instability, galloping inflation (which sometimes developed into hyperinflation), and a dramatic devaluation of the national currency.

The *shadow economy* flourished during the years of transition, and according to various estimates accounted for 33–40% of GDP. On the one hand, this created major fiscal problems and did not allow significant growth of salaries in the budgetary sector. On the other hand, it affected the social security system, which struggled with a huge deficit in an attempt to cover current costs and pay social benefits.

General impact

It became *extremely difficult to maintain facilities* in education and health care. Important consumables were not affordable, and there were no funds to cover the cost of heating during the winter period. Table 3 reveals that no significant changes occurred in 1998–2001 in the relative share of expenditures on education or health care as a percentage of the consolidated state budget (CSB) or gross domestic product (GDP). However, pressure on the budget resulted in a deterioration of working conditions, and generated a typical Bulgarian phenomenon – *a shortage of funds for salaries or delays in their payment* extending for periods of months.

Table 3.
Relative expenditures on education and health care (%)

	1994	1996	1998	1999	2000	2001
Expenditures within CSB						
Education	10.3	7.3	10.0	10.0	10.0	10.1
Health care	8.8	7.2	9.3	9.4	8.6	9.1
Expenditures within GDP						
Education	4.8	3.2	4.0	4.3	4.4	4.2
Health care	4.1	3.1	3.8	4.1	3.8	3.8

Source: *Statistical Almanac of the Republic of Bulgaria*, NSI.

Under these conditions, the budgetary sector became an object of strong restrictive policies. Any salary growth had to comply with the requirements of the IMF, and the only real source of salary growth became the reduction of staff – employees had to be released to increase the salaries of those that remained. Data for the past four years reveal that the rate of salary growth in the budgetary sector is considerably higher than the average rate of growth in other sectors (see table 4). However, employees in the budget sector continue to receive salaries that are below the national average. In 2001, the average monthly salary in education was BGL 232, and that in public health BGL 218. The salaries in the sector of government administration are much higher, at BGL 332.

Table 4.
Nominal and real average salary

Indicators	1994	1996	1998	1999	2000	2001
Non-budgetary organizations						
Nominal average salary (BGL)*	5,255	16,121	193,164	210	246	267
Real change compared to previous year	-16.5%	-11.7%	+15.2%	+6.8%	+6.1%	+0.1%
Real change as compared to 1990	-40.1%	-49.2%	-52.8%	-49.6%	-46.6%	-46.5%
Budgetary organizations						
Nominal average salary (BGL)*	4,165	9,264	155,000	177	218	251
Real change compared to previous year	-21.4%	-32.2%	+39.5%	+12.0%	+11.8%	+6.2%
Real change as compared to 1990	-49.2%	-68.7%	-63.4%	-59.1%	-54.3%	-51.4%

Source: *Ministry of Labour and Social Policy.*

* Note: From 1 July 1999, new BGL 1 = old BGL 1000. Fixed exchange rate under the Currency Board since 1 July 1999: BGL 1 = 1 DM = EUR 0.51129.

There are possibilities to increase salaries, subject to the continued growth of GDP in real terms, and this has been used as an argument in negotiations between the social partners. However, the government has usually insisted on budget sector cuts. The government imposed an income policy that required a 4% staff reduction in 1999 and 10% staff reduction in 2000 to enable salary growth. This resulted in a dramatic reduction of the number of employees in health care and education, which could not be compensated with new job openings in the private sector, and many of the dismissed employees joined the ranks of the unemployed (see table 5). Another 10% staff cut was triggered in the budgetary sector at the beginning of 2002, disguised as the “re-engineering” of the sector.

Table 5.
Number of employed persons per sector (average for year)

Sector	1994	1996	1998	1999	2000	2001*
Education	254,972	255,820	233,049	230,939	215,474	204,006
Health care	195,219	183,771	167,999	161,369	147,925	125,208
Public administration	75,263	73,211	80,110	89,959	89,490	96,929

* Data for 2001 are at the end of the year.

Source: *Statistical Almanac of the Republic of Bulgaria*, NSI.

The threat of unemployment was hanging over education and health care. In central and local governments employment has increased, and despite all declarations that layoffs are to come, new administrative jobs have been created in regional administrations and government agencies. Staff cuts do not reflect a homogeneous process, but it is evident that the main victims have been teachers and medical staff.

Specific sectoral factors

Other factors that worsen the situation in the area of *secondary education* are the demographic crisis in the country, a declining number of students, and a growing number of children who drop out or never go to school. The latter development has various reasons, but mostly it is due to poverty. As a result, schools are closed down or merged, and jobs are lost.

In *health care*, mistakes committed over the course of reforms have had a significant impact. From a government funded system, health care switched to an insurance funded system in 2000. However, the new system was implemented in outpatient care only. The differentiated pace of reform led to severe conflicts among various structural units in the health care system, provoked by a dramatic difference in the salaries of health professionals. Relations between patients, physicians and the insurance fund deteriorated as a result of the elimination of a number of free services, but also as a result of extreme bureaucracy and paperwork burdens that attended the reform.

During the transition period, *central and local government administration* suffered from continuous political appointments and dismissals, which undermined the pro-

fessional level of services while generating permanent insecurity and fears of job losses due to frequent government reshuffles. Even the adoption of the Public Servants Act in 2000 failed to increase the level of stability and transparency in this sector. Meanwhile, never-ending amendments to the legal framework and a failure to bring new provisions into conformity with other legislation generated further tension and chaos. The fact that the implementation of the new legislation was in the hands of central and local administration employees only added to the uncertainty.

2.3. The Problems of Societies in Transition – Stress Catalysts

According to one of the major hypotheses of the present survey, stressors tend to be much more virulent during the transition from a centralized to a market economy and to democracy than they are in other societies. For Bulgaria, this statement is even more strongly valid, as the transition lasted longer and affected many areas of activity. The findings of the survey confirm this hypothesis. The respondents were expected to identify the impact of a wide range of problems, separately for each problem. Then the problem areas were narrowed down to three major issues in society, the city or the family that have the most powerful impact on the respondents themselves.

A general assessment reveals that an overwhelming part of the problems of society are a source of concern – i.e. they are a stress factor – for over 90% of the respondents (see annex 1). *The number one stressor is beyond doubt the dramatic decline in living standards* for a major part of the population and the situation of poverty. This factor has a powerful negative effect on 90.5% of the respondents in their own general estimate, and ranks first among the three major points of concern for 55.1% of all respondents. *Economic recession* (or economic collapse, as defined by some of the respondents) ranks second. As an independent problem, it is a source of great concern for 84.1% of the respondents, and 41.9% of them see it as the second most important stressor. Several problems share the third place in the ranking – *growing crime, violence and aggression*, which are a major concern for 82.2% of the respondents. Fourth place is taken by *unemployment*, according to 81.0% of the respondents.

In the selection of the three major stress factors (annexes 2–2a), unemployment (37.4%) ranks before crime (21.9%). The respondents also shared their major con-

cern about the fact that many crimes remain unpunished (78.7%); expanding drug and alcohol addictions (73.2%); the undermining of law and public order (72.6%); flourishing corruption (71.1%); and the desire of those in positions of power to become wealthy overnight (65.7%).

Analysis of the findings according to the respondents' sector of activity shows that for those working in health care, economic stagnation ranks third as the major source of concern (36.9%), while failures in the implementation of health reform come second (43.1%). Respondents working in education show no such shift in the first three major problems, though every third respondent believes that the reform has flaws. These are clear indications that if changes are not adequately implemented, problems may develop on the level of professional activity and act as a further catalyst of stress in society.

2.4. Living and Working Conditions on the Local Level

Specific problems at the local level are a natural consequence of nationwide problems. Although the survey covered working people only, *unemployment* is a major problem cited by 78.2% of the respondents, and ranks among the three major sources of concern for 68.0% (annexes 3–4a). The situation in many regions is critical not only according to the official statistical data, but also according to the respondents in the survey. Certainly, these findings should be interpreted as a warning signal only, as the information is not representative at the regional level. However, it is indicative that the problem of unemployment is quoted as the number one problem in those areas that have been most strongly affected by unemployment (with the highest rates of unemployment, or rates above the national average). Local concerns are also increased by the fact that many are willing to migrate away from their home region to seek employment elsewhere. Table 6 depicts the situation in some localities in various parts of the country.

Table 6.
Local perceptions of the unemployment problem (%)

Region	Official unemployment rate	Respondents citing unemployment as the number 1 problem	Respondents citing migration to seek employment elsewhere as a problem
Northeastern Bulgaria			
Targovishte	32.59	81.8	27.3
Razgrad	28.44	81.4	48.8
Shoumen	25.89	84.0	24.0
Dobrich	23.01	77.8	22.2
Silistra	21.83	82.4	44.1
Rousse	19.84	83.9	16.1
Northwestern Bulgaria			
Vidin	27.58	75.0	28.1
Vratsa	24.15	63.8	34.0
Southeastern Bulgaria			
Yambol	21.91	78.6	17.9
Sliven	20.97	90.9	31.8
Southern Bulgaria			
Smoljan	25.36	76.5	47.1

* Source: National Employment Office, 2001.

Very indicative from an ethnic point of view is the case of Kardjali. Official data show that the level of unemployment there is lower than average for the country, yet unemployment is the source of biggest concern for 81.0% of the respondents, and for 38.1% the situation is becoming even worse due to migration away from the region. The citizens of Sofia are least concerned about unemployment, with 37.5% citing this as their top concern. This is in line with the fact that the capital has the lowest officially registered unemployment levels in the country.

In defining the second and the third strongest stressors, the following can be observed: when problems are evaluated separately, for the majority of people the *proliferation of drugs in schools* is a problem of significant concern (76.5%). Next

comes *the growing crime rate and lack of security for persons and property* (74.2%). But when asked to name sources of stress, certain changes in the rankings are evident – the crime problem rises to second place (62.2%), while drug proliferation in schools moves to third place (36.9%). This is quite logical, as drug dealing is classified as a crime. The ranking of the major stress factors by locality changes little depending on the sector of occupation or the number of underage dependents in the household.

The varying intensity of stress factors according to locality results in different regional patterns. The rising level of crime is a painful problem of prime importance to 83.3% of the respondents in Pazardjik, 80.8% in Blagoevgrad, 77.3% in Sofia, 72.7% in Haskovo, and 71% in Bourgas – i.e. in regions where the rate of unemployment is below the national average (with the exception of Pazardjik, where it is 23.9%). The other major problem – drug proliferation at schools – is second in importance for 57.7% of the respondents in Blagoevgrad, 52.9% in Varna, and 47.6% in Kardjali. The same problem ranks third in importance for 54.5% of the respondents in Veliko Turnovo, 53.6% in Yambol (the numbers of responses with respect to crime is the same), 51.6% in Rousse, and 47.2% in Dobrich.

Problems at the local level go beyond those described above. Some 93.1% of all respondents said that they were concerned about the pollution of the natural environment, and 58.7% said they were very much concerned about this. The issue ranks second for respondents from Sofia, at 46.6%. Although pollution is not among the major three sources of stress for the residents of Stara Zagora, Varna and Plovdiv, reference was made to it by 38.7% of the respondents in Stara Zagora, 32.4% in Varna, and 30% in Plovdiv.

The chronic deficit of funds in the municipal budget is a stress factor of high or moderate importance for 83.8% of the respondents, and 53.1% are very strongly affected by this problem. It is mentioned as third in importance by 41.1% of the respondents in Smoljan, 36.6% in Targovishte, and 36.2% in Vratsa. Some 38.3% of the people interviewed in Silistra, 38% in Pleven, 29.5% in Sliven, and many others also cited the municipal budget as the only source of social welfare benefits and salaries.

Another serious problem causing negative emotions in 88.4% of all respondents, and a very strong reaction for 45.6%, is poor infrastructure – poorly maintained streets, bad pavement, a lack of street lighting, etc. Although this does not rank among the first three most burning local problems, for 29.2% of the respondents

it is a source of major concern. On a regional level, poor infrastructure is a factor that ranks third in importance for 44% of the respondents in Shoumen, 42.4% of the respondents in Haskovo, 37.5% in Vidin and Plovdiv, and 36.7% in Lovech. It also affects 38.9% of the respondents in Dobrich, 38.7% in Bourgas, 34.6% in Blagoevgrad, and 33.3% in Kardjali, although it is not among the three major stressors in these areas.

The respondents shared their concern with respect to an insufficient number of cultural centres and health facilities, a lack of interest or incompetent management in the municipality, the problem of the homeless and begging children, low income levels, transportation problems, poor hygiene, dogs on the street, and other issues. The bottom line is that people in both cities and villages are confronted on a daily basis with a huge number of problems that generate stress. Some people take a submissive stance, while others make an effort to change the situation, but in both cases dormant stress factors sooner or later affect the health status of the Bulgarian population as a whole.

2.5. The Family: A Shelter or a Mirror of Stress?

The problems of the surrounding reality inevitably affect life within the family as well. Based on the findings of the survey, we shall try to address the question of the extent to which the home is a shelter from these problems, where people can find relief from their accumulated tensions and prepare themselves to face the stress of work.

As already noted, the top stress factor for our society is the dramatic decline of living standards for a large part of the population and the level of poverty. Apparently, the living standards of the respondents and their families are not essentially different from those of the population as a whole, even though they are not unemployed. Financial problems connected with the support of the family are the most important source of concern for 91.8% of those surveyed, while 64.4% said they were very strongly concerned (annex 5). Financial concerns are also the number one stressor in the family for 68.6% (annex 6). They rank first for 75.4% of those employed in education, 65.8% in healthcare and 64.2% in public administration. In all regions, the respondents were unanimous, regardless of gender, age, education, number of household members, number of dependent children or number of unemployed family members. Financial problems have a very

strong negative impact even on people who define themselves as psychologically stable in a stress situation (69.6%).

According to the respondents, *unemployment is the third most important stressor* on the national level, and the first on the local level. A constant fear of job loss (their own or a family member's) affects 84.2% of the people covered by the survey, and for 58.4% this fear has developed into a stress condition. This fear, by the way, is far from accidental – it involves the risk of remaining jobless for a considerable period of time and being relegated to the fringes of society. This risk also affects a person's children, who could be prevented from access to good education. Once a person enters this vicious circle, it is very difficult to break free. The concern of job loss affects 47.2% of respondents working in healthcare, 42.5% of teachers, 40.3% of central and local government employees, 50% of men, 41.3% of women, over 40% of the respondents aged 21–50 years, and 45% of households with a unemployed member. Another aggravating factor is job placement. The question of where graduates will be able to find a job remains unanswered. On the regional level, the fear of job loss is linked with the rate of unemployment. In most regions where unemployment is high, the respondents underline its negative impact – e.g. Veliko Turnovo (69.7%), Razgrad (65.1%), Smoljan (52.9%), Targovishte (51.6%), Dobrich (50%) and Vratsa (42.2%). For quite apparent reasons, 43% of the respondents believe that unemployment is the second most important stressor for the family. This opinion is also shared also by 40.4% of people who believe themselves to be psychologically stable in stress situations.

According to another survey hypothesis, the stress of the transition process and its labour, social and family dimensions (poverty stress and the stress of living in a poorly organized state) has a very bad impact on the health status of both the population and the workforce. This hypothesis is confirmed by the fact that a total of 82.2% of the respondents are affected by various health problems (their own or those of a family member), and for 42.7% this is a serious stressor. Some 37.7% of the respondents believe that this is one of the three major and most serious family problems. There is no discrepancy in the opinions of the respondents by profession or gender in this respect. Even people suffering from a disease rank this problem third. This is very significant – the bottom line is that if you lose your job and financial income, you will not have the chance to take care of your health. Only people aged 51–60 rank their health condition as the number two factor.

Returning to estimates of the various family problems, we see that the family is far from being an island of peace. *Financial instability has brought people down to*

a very primitive standard – many earn only enough to cover their living expenses. A full 83% of respondents pointed out that they feel stressed by the fact that they cannot secure clothes for their family, and 40% were very strongly stressed by this. For 77.6% of the respondents, taking care of their dependents was a source of concern (with 38.2% very strongly concerned). Securing furniture was a problem for 68.3%, and a serious problem for 27.7%. Access to continuing education turned out to be a stress factor for 62% of the respondents (a very serious stressor for 38.6%). Some people noted that the continuation of education is a painful problem because they cannot afford it. Meanwhile, 61.6% said they were concerned about taking care of their children and not having enough time for this (36.4% were very strongly concerned).

Assuming that the respondents were sincere, 24.7% experience tense relations with the partner or spouse as a stressor, while 8.2% indicated family violence. In addition, 60.5% said that tension accumulated at work affects their lives at home, and for 18% this was of great concern. Some 43.1% cited an absence of understanding and support regarding their professional problems (10.2% very strongly concerned). *In conclusion, the family is far from being a shelter from daily problems. Instead, it is a mirror of the stress of everyday life.*

3. Work Related Stressors

3.1. Work Stress: Specific Features and Prerequisites

At the workplace there is a complex interaction between the employee, the working environment and co-workers. The characteristic features of this interaction, and the requirements and the influences to which one is subjected at the workplace, can develop into sources of stress. Certainly, one should not forget that stress is subjective, and is conditioned by the personality of the respective individual. In addition, while one becomes adapted to the permanent features of a given work situation, being on the job for at least eight hours a day may release a number of stressors.

As already pointed out in section 2, the survey reveals that stress factors have a broad social, economic, organizational, and cultural context. At the same time, certain characteristic features of the workforce and jobs in public healthcare, education and public administration add to the risk of work stress. All these sectors – and especially the first two – are strongly feminized. In principle, the major professions in these sectors are defined as high stress positions because of the specific nature of the jobs and their attendant responsibilities. In addition, the people practising these professions work on a daily basis with specific social groups – people who are ill, students, the socially disadvantaged or the unemployed.

In Bulgaria there is an increased exposure to stress. Several factors lead us to this conclusion. First of all, the sectors covered in the survey have been the object of continuous reforms during recent years, including amendments to the legal framework and substantial reductions in the workforce. This has led to confusion and tension with respect to compliance with new requirements, an excessive workload for many of the staff, and a constant fear of job loss. In addition, the salaries and the funding levels of these sectors are low, even insufficient. The combination of work stress and other types of stress has increased the frustration of the workers and their ability to cope.

The present research has allowed workers to estimate and identify factors at the workplace that generate stress, and to define the three major stressors. The find-

ings reveal a whole set of stress factors at the workplace and their interaction. Generally, these factors can be classified into the following groups:

- Factors related to the formal conditions of employment
- Factors deriving from the working environment
- Factors related to work organization
- Factors connected with task design and job context
- Factors related to the micro-climate of the specific job

There are no grounds to consider *formal employment conditions* as a source of stress – the respondents are employed in the public sector and have streamlined employment relations. Some 80.3% of them have permanent employment contracts, 8.6% fixed-term contracts, 4.0% probation contracts, and 1.4% contracts under civil law. In 93.1% of the cases, the employers make social security contributions on the basis of the gross salary, and in 3.1% on the basis of the minimum wage. However, one in every five respondents indicated that *salaries are received with a delay of one to three months*, and that this is another considerable stressor, next to the low salary levels.

3.2. Working Environment

The working environment is the strongest stress factor, according to the results of the survey. The characteristic features of the working environment can be classified as follows (annex 7):

- Physical aspects
- Facilities and equipment
- Job characteristics
- Organization of the working time

3.2.1. Physical aspects of the work environment

Relevant physical aspects of the work environment include noise, lighting, temperature, hazards, pollution, smoking, absence of ergonomic conditions, as well as poor hygiene and sanitation.

Among these, the leading stress factor in all three sectors is held by noise. This is a source of considerable mental and physical strain, and causes stress according to 77.9% of the respondents. About 80% of those surveyed also qualified poor

hygiene and sanitation, polluted air and the absence of ergonomic conditions as stress factors, while 76.0% referred to work with hazardous substances. Lighting and temperature are mentioned as stress factors by 60% of the respondents.

3.2.2. Facilities and equipment

Due to the crisis in the country, there are serious financial problems with respect to the maintenance and renovation of facilities and equipment. This is even more the case in healthcare and education, and poses serious frustration for people working in these sectors. *Poor facilities and a lack of financial resources, consumables and equipment present a mental and physical burden* for nearly 60% of the respondents, and are stress factors for 87.2% of respondents in healthcare and 91.1% in education.

3.2.3. Job characteristics

Typical for all three sectors is *work with a large number of people*, work in a specific posture, a fixed work rhythm, repetitive movements, and a risk of psychological or even physical abuse. Most of these characteristics are defined by the respondents as generators of mental or physical strain. *Psychological abuse* is quoted as a stressor by 88.8% of the respondents, and the risk of *physical abuse* by 82.7%. Meanwhile, working with too many people causes stress for 74.9% of respondents. Other stress factors mentioned include an insufficient number of staff (84.0%), absence of compensation (78.3%), and overtime work (78.3%). Physical posture, the pace of work and repetitive movements were cited as stressors by a respective 45.9%, 58.7% and 52.9% of respondents.

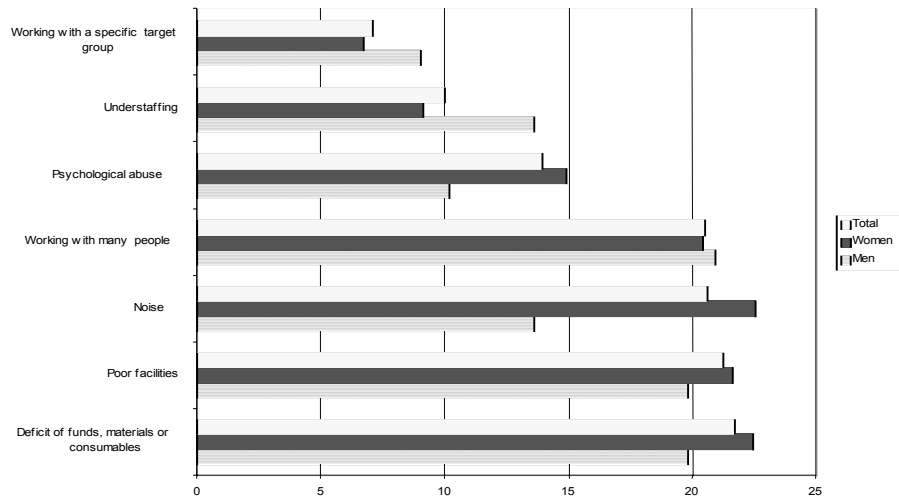
3.2.4. The organization of working time

The targeted sectors (particularly health care and to a lesser extent education) are characterized by working hours in excess of the standard eight-hour working day, night shifts, work at weekends, varying workload and work pace, as well as commuting and business trips (when the educational or health establishment is located outside the employee's place of residence).

Each of the above factors was defined as stressful by approximately 70% of the respondents. Only travel to the workplace and frequent business trips were characterized by nearly 70% of the respondents as a source of pleasure – perhaps because they provide a possibility for the individuals to get out of their usual environment and overcome the effects of work-related stress.

Asked to *define the three most significant factors of the working environment*, the respondents indicated: a lack of funds, materials or consumables (21.7%); working with many people (20.5%); noise (20.6%); poor facilities (21.2%); psychological abuse (13.9%); understaffing (10.0%); and working with a specific target group (7.1%).

Chart 1.
Major stressors in the working environment

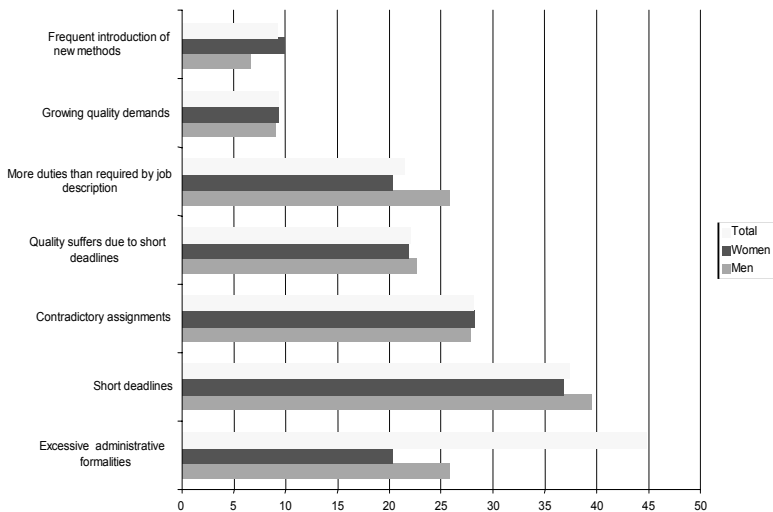


As seen in chart 1, women were relatively more stressed due to the aspects of the working environment: noise; deficit of funds, materials or consumables; and psychological abuse. Men were more likely to see other factors as stressors: work with many people, understaffing, and working with a specific target group (annex 7a). The relative share of women who reported noise as one of the three major stress factors is the highest. This is because a larger number of respondents from schools were interviewed, and women have prevailing numbers there (275 women interviewed were in education, 241 in healthcare, and 228 in public administration).

3.3. Work Organization

Several components of work organization are assessed by an overwhelming majority of employees in the three sectors as considerable stressors (annex 8). The major stressors for 92.5% of the respondents are *short deadlines* that affect the quality of work and job satisfaction. Next come *administrative formalities and paperwork*, a stress factor for 91.4% of the respondents. For 89.1%, contradictory assignments are another stressor, and 82.5% cited a *need to do more work than required by the job description*, or work that is not part of the job description. Some 70–80% of the respondents define the following as stress factors: frequent changes in work shifts; an impossibility to use legally established breaks during the working day; the frequent introduction of new methods of work; the absence of staff training programmes, especially when it comes to new equipment; and growing demands with respect to the quality of work. The *three major stressors* according to the respondents are as follows: excessive administrative formalities or paperwork (44.7%); short deadlines (37.3%); contradictory assignments (28.0); more duties than required by the job description (24.1%); growing quality demands (9.4%); and frequent introduction of new work methods (9.1%).

Chart 2.
Major stressors in work organization



As seen in chart 2, men were more likely than women to find stress due to excessive administrative formalities and paperwork and duties in excess of those required by their job description. Meanwhile, women were more likely than men to cite as stressors growing quality demands and contradictory assignments. To some extent, these differences are due to the fact that the women are more tolerant and punctual than men, but tend to work more effectively when the rules are clear and relatively constant (annex 8a).

3.4. Task Design and Job Contents

Efforts spent on good performance, skills improvement or professional advancement, as well as performance assessments, may often be either a stressor or a source of satisfaction. In addition, the very nature of work and its corresponding responsibilities may influence the mental and physical health of the employee to a considerable degree.

An overwhelming majority of respondents pointed out that they are trying to make the best of themselves professionally. For example, they said they are very dedicated to their job (90.0%), that they appreciate the usefulness and importance of their work (97.6%), and that they are trying to protect the prestige of their profession (96.4% – see annex 9). According to 85.9% of respondents, the job they hold is in full correspondence with their skills and educational standards. For most, this is a source of pleasure, yet one in every five respondents said the efforts invested are a source of stress.

Considerably more significant stress is generated by task design and job contents. According to 93.8% of respondents, their jobs are very meaningful, characterized mostly by intellectual work (83.5%), requiring independent decision-making (81.3%) and taking responsibilities for other people (71.2%). Simultaneously, some 50–70% of the respondents defined the same aspects as stressors.

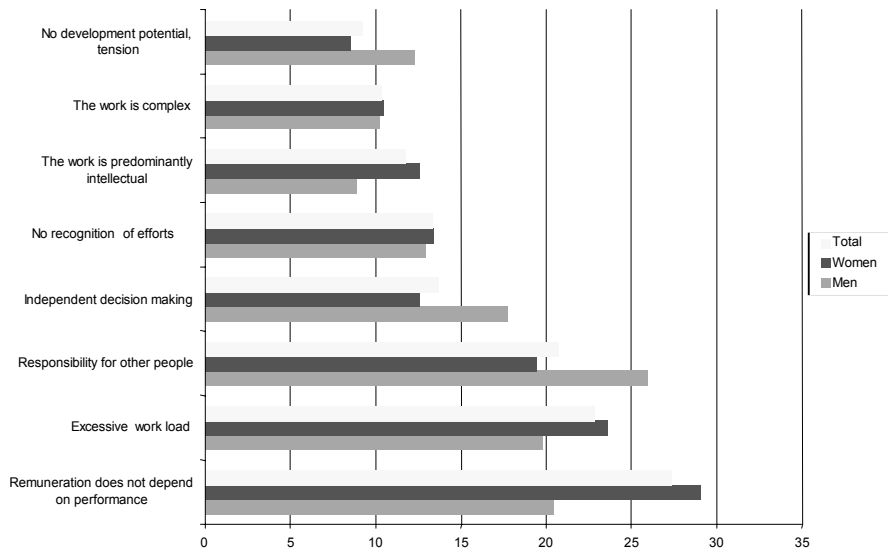
The survey reveals that efforts invested to protect the prestige of the respondents' profession do not receive appreciation, and bring about higher stress at the workplace. For 81.1%, the absence of an adequate link between work performed and remuneration received is a stress factor. For 59.4%, the lack of fit between job performance and promotion is a stressor. Meanwhile, the feeling that the improvement of professional skills is not encouraged or appreciated is a matter of concern and stress for 51.5%.

The major stress factors with respect to task design and job contents were seen as the mismatch between work performed and remuneration received, an excessive work load, a necessity to make independent decisions, job complexity, and other factors.

Although most factors in this category do not exhibit a clearly expressed correlation in terms of gender, as seen from chart 3, women tend to be more stressed than men by the discrepancy between work performed and remuneration received and by an excessive workload. This is apparently the result of the fact that women are twice as busy – with responsibilities at work and at home. Unfortunately, the last representative survey performed in Bulgaria on the workload at home is from the 1990s. The survey showed that women spend over five hours on domestic duties, as compared to just two hours in the case of men.

One in four men indicated that responsibility for other people and the need to make independent decisions were major stress factors (annex 9a). This is probably also due to the fact that the percentage of men in top positions is considerably higher than that of women.

Chart 3.
Major stressors in task design and job contents



3.5. The Micro-Climate and Relations at the Workplace

There is considerable stress potential at the workplace with respect to relations between staff members and management, as well as management style. Many stress researchers point out that an absence of mutual respect, support, tolerance and understanding among fellow workers and at various hierarchical levels generates high levels of stress. The findings of the present survey indicate that the *micro-climate in which most respondents work is relatively favourable* (annex 10). Over two thirds indicated that they have the support of their colleagues in difficult situations (73.5%); that they can rely on their direct supervisor when necessary (71.1%); and that relations between subordinates and supervisors are good (72.4%). In addition, 92.9% do not feel isolated from their colleagues, and for 94.6% the chance to communicate with their colleagues reduces stress and creates a beneficial environment – which is a natural source of pleasure for them. Those who said this was not the case with their workplace estimated the same aspects as stressors.

Over half of all respondents believe that everyone may state their opinion freely at the workplace, without any concern for negative consequences (58.2%). Some 55.8% said that loyalty is appreciated and encouraged, and a further 51.8% noted that a job well done is acknowledged publicly. According to 63.7%, there are democratically established procedures for team discussion of problem issues.

At the same time, more than half of all respondents referred to some characteristics of the micro-climate as stressors: poor management of human resources that does not provide motivation for good performance (63.3%); the absence of personal data confidentiality (55.4%); the existence of “friendly circles” or cliques in the team (51.7%); the risk of suffering negative consequences due to information shared with colleagues (51.9%); and the impossibility for career advancement without acting in contradiction with one’s values (51.5%).

Although strong gender correlation was not established with most of these reported factors, they were cited by a larger number of women than men, with the exception of the “friendly circles” factor, which is a bigger stressor for men. *Many studies in Bulgaria reveal that the women are subject to sexual harassment at the workplace with regard to appointment, promotion and payment.* This could be the reason why many more women said it was impossible to advance in their careers without acting in contradiction with their values.

3.6. Discrimination

Discrimination at the workplace can be a serious source of stress. However, discrimination is not perceived as a serious problem at present in Bulgaria. This is due to a number of factors – particularly the high unemployment rate, which creates a tendency to accept any position offered, under any circumstances. The findings of the survey reveal that over 70% of the respondents do not feel discrimination at the workplace. The remaining 30% cited various reasons that made them feel discriminated against:

- Age 9.3%
- Educational standards 7.5%
- Political convictions 6.8%
- Trade union membership 4.7%
- Gender 4.6%

It is noteworthy that men feel more discriminated against because of their political convictions, while women feel the same simply because they are women. For these reasons, the respondents felt they suffered discrimination with respect to their payment level (12.2%), professional advancement (10.3%), and improvement of professional skills (5.7%). Men tend to feel more discrimination with respect to pay, while women point to discrimination mostly when applying for a position or a promotion. Although only 8% indicated there was gender discrimination at the workplace, 60.9% assumed it was a stress factor.

4. Stress Level: Symptoms and Effects

4.1. Work-Related Stress Levels: Measurement and Verification

The generally adopted model of stress level measurement is based on the following research concepts:

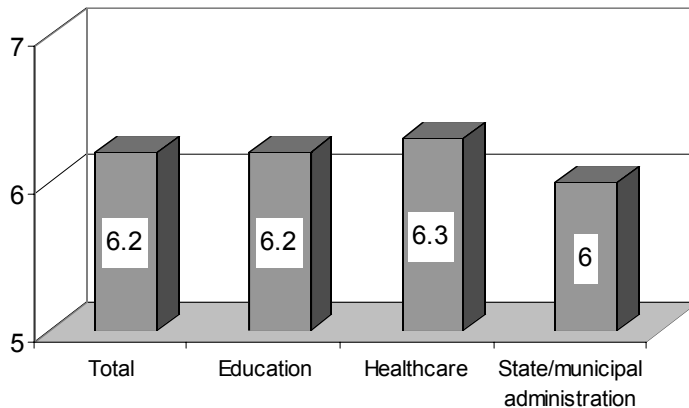
- It covers four factor areas provoking exposure to stress: the *work environment*, *work organization*, the *occupational environment* and the *micro-climate* (team interactions). A number of variables indicating the level of stress can be found in each of these areas. There were 25 such variables defined for the work environment, 10 for work organization, 16 for the occupational environment and 14 for the micro-climate – for 65 variables in total.
- Each variable is scored with a value of up to 10. The score reflects a total of points based on different responses. To obtain the overall score of a variable, the point score is weighted with the percentage frequency of the cases (see appendix 2).
- The individual, group and integral stress level measurements are evaluated on a scale as follows:

> No stressor	Up to 4 points
> Low level	4 to 5 points
> Medium level	5 to 6 points
> High level	6 to 7 points
> Very high	7 to 8 points
> Exceptionally high/extreme level	Over 8 points
- Specific measurements are verified following logical control assumptions for each factor area.
- Finally, the overall level of stress is reflected in an integrated stress level indicator, which also covers the social environment (22 variables), location (13 variables) and the family environment (16 variables).

The survey results following the application of the above model for mea-

measuring stress at work show a *high level of stress in all three of the sectors surveyed*. Overall scores were 6.3 in health care, 6.2 in education and 6.0 in public administration. The level of stress in the entire sample surveyed was 6.2 (see chart 4).

Chart 4.
Level of stress



In the health sector, 15 “very high” stressor variables and four “exceptionally high” variables are present. These are as follows: low reward for work performed (8.9); need for independent and responsible decision-making (8.6); assuming responsibility for other people (8.5); and job complexity (8.3). At the low extreme are frequent business trips – where the score of 3.3 objectively matches the nature of the job performed (services in a specific residential area). The following variables can be distinctly identified as stress provoking factors in health care, making it very different from the other two sectors:

- Work with dangerous substances and hazardous work activities (6.1 vs. an overall average of 4.3)
- Work scheduling outside biological rhythms (5.7 vs. 3.9) and outside of social hours (5.8 vs. 4.4)
- Insufficient staff (6.6 vs. 5.6) and overtime (5.3 vs. 4.8)

- Frequent changes in shift schedules or staff (5.3 vs. 3.9)
- No work breaks (5.6 vs. 5.0)

A total of 13 variables indicate a very high or exceptionally high level of stress in education. Such parameters as excessive noise (8.3), shortage of resources, supplies and materials (8.1), low rewards for job performance (9.0), mental strain (8.7), need to make independent and responsible decisions (8.6), assuming responsibility for other people (8.5), and the presence of “friendly circles” or cliques among co-workers (8.2) reach levels above 8 on the scale. Actual stressor absence can be reported for such variables as frequent business trips (3.3), work scheduled outside of biological rhythms (3.2); work scheduled outside of social hours (3.8) and work with dangerous substances and hazardous activities (3.8).

The following work environment parameters are substantially different in education as compared with the other two sectors:

- Noise (8.3 vs. an overall average of 6.6)
- Temperature in the work space (6.7 vs. 5.9)
- Poor hygiene and sanitary conditions (6.3 vs. 5.2)
- Air pollution (6.3 vs. 5.6)
- Inadequate facilities (7.7 vs. 6.5)
- Shortage of resources, supplies and materials (8.1 vs 7.2)

The general level of stress in the sector of public administration in central and municipal government is below the level of the other two sectors, although it still falls in the “high stress” category overall. *A total of 13 variables show a very high level of stress and another five have extreme values in public administration:* excessive administrative formalities and paperwork (8.0); low reward for job performance (8.4); mental strain (8.5); need to make independent and responsible decisions (8.3); and the presence of “friendly circles” among co-workers (8.0).

The variable “frequent changes of shift schedules or staff” has practically no stress impact in the sector, with a score of 2.7. This applies in practice to white-collar employees, who have no shift work and fixed hours of job attendance. More pronounced is a sense that the job they occupy does not match their qualifications (5.3 vs. 4.8 in health and education). Administrative employees, however, can rely on less peer support in critical situations – the stress level under that variable is 6.1 (vs. 5.4 in health care).

Data analysis of the stress levels in the three sectors of the budget-funded sphere shows that while there are specific factors and differences concerning

some variables that are quite sensible and in line with the expectations and preliminary assumptions of the research team, some general trends can be observed in the manifestations of stress factors provoked by the crisis situations of the transition process. First among these is a wide disparity between rewards and job performance – something ruled out as a matter of principle in stable developed societies (where these three sectors are among the best paid and enjoy high social prestige). Typical for the transition stressors are also inadequate facilities; acute shortages of resources, supplies and materials; and a lack of money for heating (most pronounced at schools). These characteristics of work cannot but influence the following results of the survey with regard to high stress factors:

- Psychological abuse (6.1 on the average for the three sectors)
- Job performance quality (7.2)
- Task setting with conflicting requirements (6.6)
- Task execution within shorter deadlines and as an emergency (7.3)
- Opportunities for advancement (7.2)
- No incentives to acquire a higher level of qualifications (7.2)
- Human resources management and work motivation (7.8)

Naturally the main occupations prevalent in these sectors concerned are especially sensitive and reactive to stress. As shown by the data, the level of stress among teachers (6.3) and physicians (6.4) is slightly above the general level in education (6.2) and health care (6.3), but there may be very substantial differences between some typical individual variables (see table 7).

Table 7.
Stress levels among teachers and physicians by typical variables

Variable	Teachers		Variable	Physicians	
	Score	Average in education sector		Score	Average in health care sector
1. Noise	8.8	8.3	1. Work with dangerous substances and work hazards	6.7	6.1
2. Inadequate facilities	8.2	7.7	2. Psychological abuse	6.6	6.1
3. Poor hygiene and sanitary conditions	6.6	6.3	3. Overtime	6.3	5.3
4. Shortage of resources and materials	8.5	8.1	4. Responsible decision making	9.3	8.6
5. Responsibility for other people	8.8	8.5	5. Work on days off	6.6	5.8
6. Low pay	9.2	9.0	6. Job complexity	8.7	8.3
7. Work space temperature	6.9	6.7	7. Shortage of resources and materials	7.8	7.5

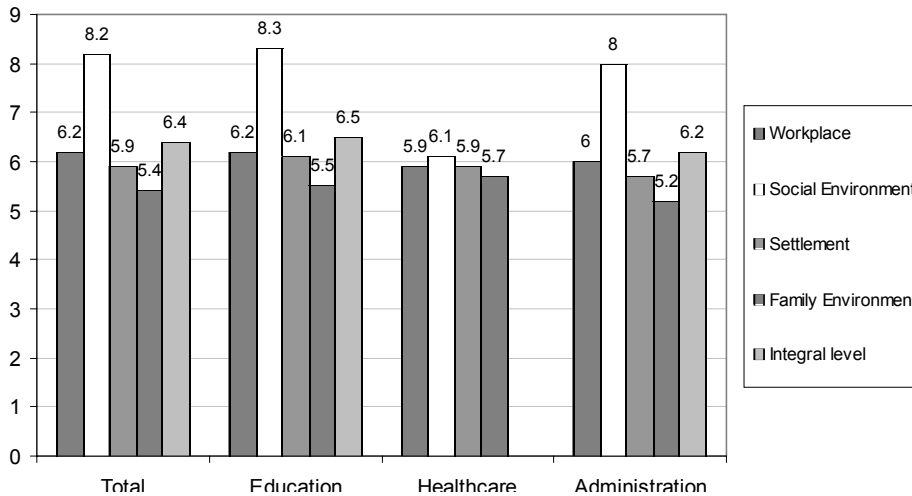
Evidently, those who form the image of the occupation and regard work as a vocation are most at risk of bearing the consequences of improperly implemented reforms, and the negatives of the transition process have been quite painful for them.

Stress is a phenomenon whose causes naturally cannot and should not be sought in an isolated environment. The human being is a social individual that lives and develops in a variety of environments and is exposed to the impact of those environments. Their overlaps determine the complexity of relationships, and show effects that are ultimately manifested as a general level of stress. Looking for such an integrated measurement of the stress level, we continued with

the analysis of the impact of the social and family environment, the problems of the settlement of residence and the family environment (see chart 5).

We are aware how difficult it is to differentiate the effects of different environments on stress, because stress at work is strongly influenced by specific factors and incidents in the family and town, as well as by any grave social issues that may arise. Nevertheless, the respondents defined their social environment as stressful in the extreme, with an overall score of 8.2 points. Employees in both education and health scored at 8.3, while public administration showed a stress level at 8.0 points. The changes in the social, economic and political life of the country are accompanied by many serious problems, such as crime, high unemployment or low living standards, which have already been analysed in section 2. We can only add that the problems of society at large are transferred to the town, family and workplace – i.e. they are a dominant factor in the high stress environment. However, this is difficult to model mathematically, and the attempt to present an integrated level of stress is more of a general assessment and does not claim to reflect reality precisely. Clearly, the failures of transition have led to the appearance of a very stressful environment, causing changes both in conditions at the workplace and in the family environment, only recently considered “an inaccessible fortress” by many Bulgarians.

Chart 5.
Stress levels by types, sectors and environment



4.2. Stress Symptoms

The striking feature revealed by an analysis of the findings is a high incidence of most chronic disease symptoms, indicating a high level of chronic stress with psychosomatic, emotional and behavioural effects. The incidence of sporadically manifested symptoms representing moderate stress levels or incidental stress reactions is even higher. In combination with some chronic symptoms, they complement the picture of chronic stress as seen from total symptom frequency. The average for the study is 9.7 symptoms per person (3.4 chronic and 6.3 sporadic). Moreover, in the first half of the rating, the share of chronic symptoms within total symptoms ranges from 26% to above 50% of the aggregate symptom frequency.

Table 8.
Stress symptoms rating

Chronic		Sporadic		Aggregate	
Symptom	Frequency	Symptom	Frequency	Symptom	Frequency
1. General fatigue	56.5%	1. Headache	54.3%	1. General fatigue	95.9%
2. Thinking about the job	36.8%	2. Irritability	51.5%	2. Headache	85.7%
3. Headache	31.5%	3. Despondency Indifference	48%	3. Thinking about the job	72.4%
4. Eyesight problems	30.7%	4. Insomnia	46.4%	4. Irritability	71.3%
5. Rapid fatigue	25.5%	5. Back pain	43.5%	5. Rapid fatigue	68.3%
6. Back pain	22.9%	6. Rapid fatigue	42.7%	6. Back pain	66.4%
7. Irritability	19.8%	7. Morning fatigue	40.4%	7. Insomnia	64.4%
8. Insomnia	18.0%	8. General fatigue	39.4%	8. Eyesight problems	62.4%
9. Morning fatigue	14.4%	9. Muscle and joint pain	37.8%	9. Despondency Indifference	58.6%
10. Muscle and joint pain	13.7%	10. Chest pain	36.6%	10. Morning fatigue	54.8%

11. Breathlessness	13.5%	11. Thinking about the job	35.6%	11. Muscle and joints pain	51.5%
12. Chest pain	11.4%	12. Dizziness	33.4%	12. Chest pain	48.0%
13. Dizziness	10.5%	13. Eyesight problems	31.7%	13. Dizziness	43.9%
14. Despondency Indifference	10.5%	14. Breathlessness	26.8%	14. Breathlessness	40.3%
15. Numbness of the limbs	9.5%	15. Numbness of the limbs	24.5%	15. Numbness of the limbs	34.0%
16. Heavy stomach	7.1%	16. Heavy stomach	22.8%	16. Heavy stomach	29.9%
17. Indigestion	4.0%	17. Indigestion	17.2%	17. Indigestion	21.2%

Among the ten most frequent symptoms are those suggesting nervous mental and negative emotional tension, as well as physical and emotional exhaustion, as part of the “burn-out” syndrome. This may be due to specific characteristics of the sample, covering representatives of “support” occupations and work that demands close contact with “dependents” – i.e. students, patients and afflicted citizens. The frequency of chronic symptom patterns is approximately the same in each of the surveyed sectors, with higher levels than average for the sample usually reported in education and lower levels in public administration. The symptom frequency in health care vacillates around the average for the sample as a whole. However, there is a significantly higher than average frequency of “general fatigue” and “eyesight problems” in administration, and of “heavy stomach” and “indigestion” in health care.

With some reservations as needed, it may be interesting to draw a comparison with some data from the latest survey (2000) of working conditions in the EU. In our sample, 31.5% of the respondents complained of chronic headache, while in the EU just 15% of the workers said the same. Meanwhile, 56.5% of respondents in our sample suffer from general fatigue, compared to 23% in the EU.

An analysis of the stress symptoms of the above disorders shows that the high frequency of chronic symptoms is not due to the presence of any chronic diseases. The observed negative psychosomatic conditions are more likely a consequence of strong, chronic and insurmountable stress.

The high levels of stress are confirmed by data on leave time used. *Generally, 59.7% of the respondents had experienced stress exposures in the 12 months prior to the survey.* A total of 22.4% used different types of leave time from work: 7.7% went

on sick leave, 13.6% on paid leave and 1.1% on unpaid leave. Some 37.4% of all respondents who went on leave because of stress obtained sick leave due to indications of clinical stress conditions. A further 66% of those on leave due to stress took paid leave, and 5.4% unpaid leave. This situation may be subject to different interpretations. A reluctance to use sick leave may be present for considerations of a financial, social, cultural or job-related nature. Also there may be difficulty or inability to prolong sick leave due to stress, or unwieldy bureaucratic procedure and lines of people in front of the doctor's office, or a lack of conviction that doctors will recognize stress conditions as disease (stress is generally not diagnosed in the country).

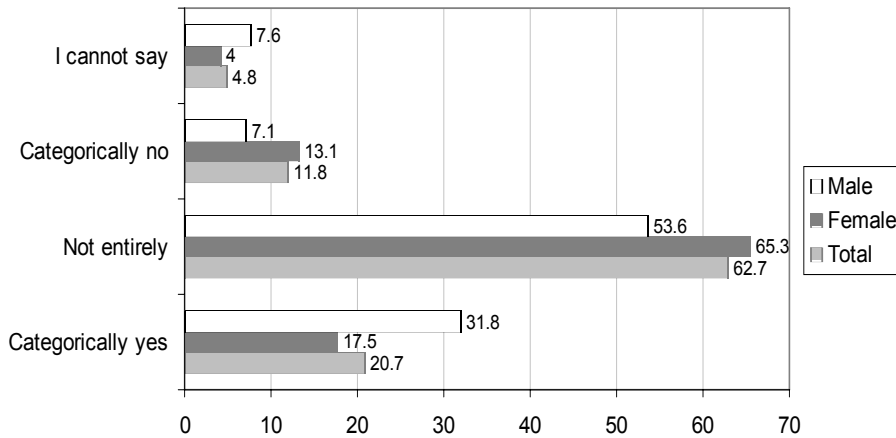
Meanwhile, a high percentage of respondents suffered stress but did not go on leave (39.2%). That can be explained as a manifestation of "presenteeism" (as noted by Cooper), the suggested official reasons for using paid or unpaid leave, or an inability or reluctance to do so. Of all people who have suffered from stress, those who have not used any leave (65.5%) are nearly twice as numerous as those who went on leave (37.5%). Besides the reasons already listed for a reluctance to go on leave, there is a tendency to make light of the stress condition, or to seek a more moderate level of stress. Furthermore, work organization in health and education is seriously disrupted by absences. Finally, one fourth to one third of those who reported not being affected by stress also reported chronic experience of the top ten symptoms. This suggests the absence of any personal perception of chronic stress.

4.3. Stress Resilience and Coping

Self-reported resilience to stress situations is also of interest. Basically, the same irritants with the same stressor exposure do not always generate exactly the same responses in different individuals. This is because the amount of "anti-stressor" hormones produced from individual to individual is different too. Their purpose is to build adjustment mechanisms and protective responses necessary to overcome stress. The degree of their incidence depends on the physiological condition of the individual and the strength of their emotions. That is why people react differently to stress situations – some are more resilient, others less so. The data from the survey indicate that *11.8% of the respondents are not resilient to stress situations and experience psychological instability. Women are likely to be less resilient in stress situations*

than men – 13.1% of all women respondents think that they are not resilient in stress situations, compared to 7.1% of men. By age group, this psychological instability is most strongly manifested (15.8%) among those 51–60 years of age – of these, 75% are women.

Chart 6.
Self-reported stress resilience



The highest percentage of respondents believe that *they are not very resilient to stress*. A total of 62.7% of the respondents state that while they are not affected by some situations, others may bring them out of control. This depends on the harmonious functioning of the human body and its ability to adapt on the one hand, and on the presence of latent chronic insurmountable stress on the other. A very pronounced relationship is observed between resilience to stress and age. The highest frequency of those responding that they have limited resilience to stress is observed among respondents aged 31–40 (66.5%), followed by the 41–50 age group (65.4%). A decline to 61.2% is observed among those aged 30 and younger, but this does not at all imply that they feel resilient to stressors. On the contrary, more than half of all working youths surveyed do not have the ability to quickly adjust to the conditions of work or build effective protective responses in the process of learning their occupation.

According to a *gender* breakdown, 65.3% of all women respondents participating in the survey believe they are not very resilient to stress, compared to 53.6% of men. The slight numerical superiority of women is predetermined by the specific nature of the sample. On the other hand, there is an assumption that women are more vulnerable to stress due to their double burden of professional and family obligations. The combination of these two responsibilities generates a higher risk of stress development.

Of interest is also the relationship between self-reporting on stress resilience and *position in the job hierarchy*. According to the data, it may be assumed that managers are less likely to find themselves in a stress situation than staff. For example, 29.7% of managers feel mentally resilient in many critical situations, compared to 18.4% of subordinates (it should be noted that managers represent 20.5% of the total sample.) Still, the highest percentage of managers – 60.4% – responded that they are not very resilient in stress situations. That seems to be in line with the widespread thesis concerning “manager stress”, yet in this context it is more likely a reflection of the failures of the health and education reform and the tendency to burden managers with problems and responsibilities whose solution is beyond their control. Some 20.7% of all respondents identify themselves explicitly as resilient in stress situations. Slightly more than one third of all male participants in the survey (31.8%) perceive themselves thus, compared to only 17.6% of female participants.

The survey provides interesting information about *coping with stress* situations. One may be active or passive in coping with a stress factor. The aim in active coping is to bring the stress situation under control in order to change it and remove the stress factors. This behaviour is normally associated with a need to identify the source of stress, gather information as necessary, and undertake appropriate actions to cope with the stress situation by consulting top managers and peers in a search of joint solutions to remove the stress factor, or at least to reduce it to a minimum. Some 21% of respondents rely on social support from their peers at the workplace.

Passive coping with stress requires adjustment to the stress situation and its acceptance as inevitable. The use of tranquilizers and anti-depressants, which may alter the personality of the individual and narrow their emotional horizon, does not eliminate the source of stress. These simply offer an easy way for the organism to relax temporarily without activating the defence mechanisms for coping with stress. However, this temporary relief from the impact of stress also provides

conditions for the development of more serious distress. The same is true of such behavioural reactions to stress as alcohol abuse and tobacco smoking and their negative impact on health.

Naturally, active coping with stress is the better solution. That, however, depends not only on personal qualities, but also on the material and social resources available. When the stress factors are beyond the scope of personal control, what remains is the alternative of passive stress management and unsuccessful coping strategies.

As shown by the data from the survey, *in a stress situation 52.8% of the respondents seek support from the family, and 44.5% share their experiences with friends.* What is interesting is that the respondents relieve the strain by sharing it with others who do not belong to their work environment and are not directly linked with the cause of stress. In this case, coping strategies may be aimed at seeking instrumental support away from work, or seeking emotional support as the only alternative available when stress factors are insurmountable. Seeking support and understanding from the family often leads to stress reproduction and a transfer of the strain to the other members of the family. Such stress may have serious consequences in families with one unemployed member, and its impact may be even graver if two family members are unemployed – 65.2% of the respondents seeking support in the family have one unemployed and 32.6% have two unemployed family members. In the final analysis, unemployed family members are exposed to stress factors beyond their control, and are affected by the problems confronting each family member in society or at the workplace. The consequences of stress in the family may manifest themselves long after the stress factor has stopped operating, because it takes a longer time to overcome tension accumulated over the course of years because of a lack of security and concern for the family's economic, educational and social future.

Another widespread method of coping with stress situations is the use of Valium, valerian or herbs (18.1%) and the use of soporifics or tranquillizers (11.0%). The treatment of stress with medication can be a precursor to higher morbidity and hypersensitivity. Women tend to resort more often than men to medication to cope with the stressor (32.6% vs. 17%).

The consequences and negative impact on health are no less serious when coping with a stressful situation by increasing the number of cigarettes smoked (27.9% of respondents) or finding consolation in alcohol (3.4%). Alcohol and cigarettes are not anti-stress factors. They may suppress stress, but lead to another kind of

stress. These additions, as reported, are more frequent among men (38.1%) than women (29.5%). On the other hand, increased cigarette smoking and solace in alcohol are typical for respondents who do not feel very resilient in stress situations – 64.8% and 61.8% respectively.

Another stress coping strategy is to take a walk in the open (29%). This is not targeted at the source of stress, but at its impact. Physical and mental relaxation may improve stress resilience.

The other methods of coping with stress situations are less significant in size and scope. A faster pace of work is reported by 20.3% of the respondents. Work overload as a result of stress has negative consequences for the physical and mental state of the individual. It is followed by strong exhaustion and collapse of the defensive mechanisms, exposing the organism to a higher risk of illness.

Some interesting conclusions regarding coping strategies can be reached in the data concerning *involvement in additional activities*. The most frequent active coping strategies include is trade union activity at the workplace (42.4%), followed by club activity (36.2%), a second job (36.2%), trade union activity outside the workplace (26.5%), and political work (21.6%). The search for social resources prevails as a coping strategy – 36.2% resort to increased material resources to cope with stress. However, such a strategy is difficult to apply because of the high level of unemployment. The assessment of unemployment as a stress factor by more than half of the respondents indicates that this is a strategy used out of necessity rather than choice. Some 90.5% define club activities as a source of pleasure, but only 36.2% participate in such activities. Some possible reasons are lack of time because of a second job, financial difficulties, family problems or problems of everyday life. In all cases, this is suggestive of needs frustration. The high frequency of trade union activity at the workplace indicates the search for additional social resources and instrumental support. Another contributing factor is the fact that it does not require additional time or the spending of personal money.

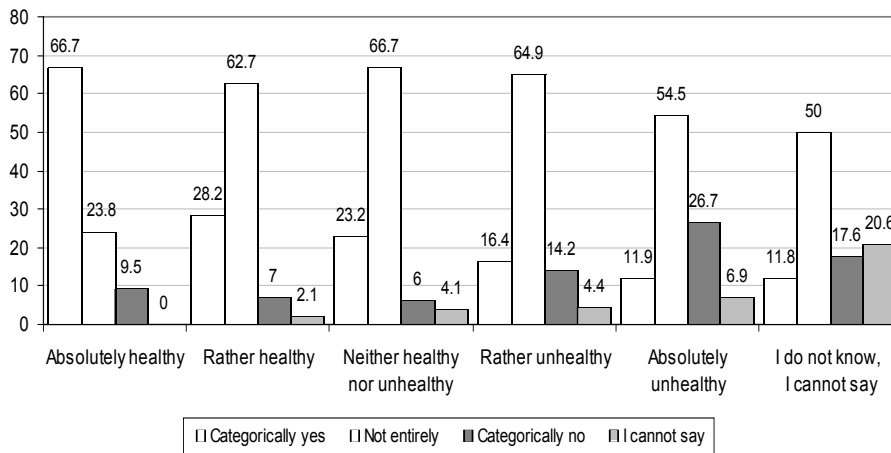
The high percentage of respondents not involved in any additional activities (even ones that do not require additional time or resources) is an indicator of passive coping strategies due to the lack of material resources, coupled with a refusal to look for social resources since stress factors are perceived as something beyond personal and collective control. To a large extent, this may be explained by physical and mental exhaustion, suggested by the reported high levels of chronic general fatigue. The frustration of needs leads to apathy, a narrow range of interests,

encapsulation within oneself and the family, and social isolation. In this situation, latent insurmountable stress becomes distress.

Stress mediators consist of coping strategies and lifestyle elements that largely depend on material and social resources available. A total of 32.1% of respondents define their lifestyle as neither healthy nor unhealthy. A further 37.3% say their lifestyle is more unhealthy than healthy, and 10.2% say it is totally unhealthy. This means that a full 79.6% of the respondents believe that their way of life is unhealthy to one degree or another. The reasons for this are low incomes, very low consumption and deteriorating, imbalanced nutrition – rather than low culture and the absence of appropriate habits for a healthy way of life.

An unhealthy lifestyle suggests a lower level of resilience in stress situations. The data from the survey show that 76.7% of those assessing their life as unhealthy in some degree feel or prove to be not resilient enough in stress situations. The activation of the body’s defensive mechanisms against stress depends primarily on the health status of the organism, determined by lifestyle factors. Nearly two thirds of the respondents who assessed their lifestyle as very healthy define themselves as completely resilient to stress situations.

Chart 7.
Lifestyle and stress resilience



4.4. Stress and Workers' Health Status

Deteriorated psychosomatic conditions can be explained by the high level of chronic stress symptoms and the data concerning coping strategies and lifestyle.

Chart 8.
Disease rating



The incidence of *sensory organ disorders* is striking, at 31%. This percentage correlates in a very interesting way with the frequency of the chronic symptom of eyesight problems (30.7%) – which is strongly manifested in education and public administration, and also quite significant in health care. Moreover, one of the most stressful factors in all the three sectors surveyed is excessive paperwork, in which the organs of eyesight are most chronically strained as compared with the other sectors. Computer work is also significant for 46.7% of the respondents, who spend from one to five or more hours in front of a screen on a daily basis. Another important stress factor in all three sectors is noise generated while working with many people.

Since the incidence and rating of all other stress generated disorders match the data concerning the total population, it is very likely that these disorders, rather than being completely occupationally determined, are largely generated by high nervous and mental strain and a low quality of life in the difficult conditions of transition.

Table 9.
Percentage of individuals suffering from basic chronic disorders

	Total	15–64	25–64
Ulcer	6.3	24.0	35.15
Migraine and frequent headache	13.0	25.5	34.4
Continuous state of anxiety or depression	8.1	24.36	33.65
Blood pressure	21.3	19.6	28.6
Arthrosis, arthritis	7.5	16.5	24.45
Diabetes	3.5	16.5	24.0
Asthma	2.7	16.9	21.45
Cancer	0.8	22.8	22.8

Source: NSI, 2002.

The data concerning the level of stress and relevant psychosomatic and behavioural disorders, morbidity and lifestyle are confirmed by the findings of a survey of the health status of the population in Bulgaria carried out in March 2001 by the National Statistical Institute (NSI). The results are quite suggestive of the high price of the transition and its consequences.

Self-reporting on health

The first important result of the survey is that *in the past four years, the health of the population has significantly deteriorated* both for men and women, as assessed in the subjective opinions of the respondents (annex 13).

The percentage of individuals aged 15 and over who define their health as “good” or “very good” – an indicator used in international comparisons – is 55.5% in Bulgaria. This is much lower than in the EU member countries (annex 12).

Morbidity rate of chronic diseases

The morbidity rate has remained high in the past four years, even though morbidity due to chronic diseases has been declining for both men and women (annex 13).

- **Hypertension** is the most widespread chronic disorder (21.3%). Most numerous among those affected are individuals aged 45–64 (44.2%).
- **Heart attack.** Most affected are people aged 45–64 years. Of the total number of people suffering from heart attack, 41.6% are in this age group.
- **Cerebral stroke.** One third of those affected by cerebral strokes are in the 45–64 age group, and they are mostly economically active persons.
- **Migraine and frequent headache.** Most numerous among those suffering from migraines and frequent headaches are individuals aged 45–64 (37.6%).
- **Continuous anxiety or depression.** Most numerous among those affected are once again individuals from the 45–64 age group (40.7%), followed by those aged 25–44 (26.6%).

Migraines and frequent headaches as well as continuous anxiety and depression are the most widespread symptoms among the survey participants, diagnosed in two thirds of all cases. The portion of individuals who receive treatment is approximately the same. In the remaining one third of the cases, respondents have symptoms and complaints, but their health disorders have not been diagnosed by a physician.

Tobacco smoking

Tobacco smoking has continued to spread intensively among women (annex 14). The proportion of smokers among youths aged 15–24 has grown from 38.8% in 1996 to 41.3%. Three fourths of the young people who smoke do so on a daily basis.

Smoking is most widespread among individuals 25–44 years old – 58.5% in this age group are smokers. The increase in the number of smokers is even higher among those aged 45–64, by 7.8 percentage points.

Alcohol consumption

Alcohol consumption is spreading most rapidly among women (annex 15). Growing alcohol consumption among people of both sexes is found in all age groups, and above all among young people aged 15–24 – from 52.0% in 1996 to 70.0% in 2001.

Physical activity

In four years, the proportion of people who have a low level of physical activity has grown by 4.5 percentage points, from 35.6% in 1996 to 40.1% in 2001 (annex 16).

Life expectancy in good health

Life expectancy in good health is decreasing for both men and women in all age groups (annex 17).

4.5. The Cost of Stress: A Collective and Social Problem

If we accept the opinion of some European researchers that 10% of workplace absences due to sickness are caused by occupational stress (7.7% in our survey), the financial cost of stress directly calculated for Bulgaria turns out to be rather low as compared with data from other European countries – 0.03% of GDP. The reasons for this are several:

- A low proportion of salaries in total GDP, and hence lower cost in terms of sickness, employment accidents and occupational diseases benefits
- A drastic decline in the number of insured persons (by about 50% in 2000, as compared with 1989, according to the NSI's *Yearbook of Statistics* for 2001)
- The grey economy (30% of GDP, according to prevailing estimates), involving unsettled employment and social security relations not captured in the national statistics
- Social security coverage based on the minimum wage, which is widespread in the private sector, and therefore correspondingly low levels of benefits
- A reluctance on the part of a number of private employers to pay benefits for the first three days of sick leave, and hence a refusal to accept sick leave certificates
- The phenomenon of presenteeism (turning up for work despite being sick) due to job insecurity, fear of redundancies and other considerations (39.2% in this survey).

Nonetheless, the conclusions from this survey and the data on the health status of the population suggest that the total cost of stress is much higher for Bulgaria. The

costs of health care, absence from work due to stress on paid or unpaid leave, products not manufactured and services not delivered cannot even be calculated for all absences due to stress. What is clear is that the costs of psycho-social stress have been too high in the period of transition. We now examine some of these costs in turn.

Low productivity

This indicator is associated with outdated equipment, obsolete methods of work and a low culture of production. However, the fact that high productivity cannot be expected from chronically stressed workers even with modern equipment and work organization is often overlooked.

Mortality

- The **growth of general mortality** from 11.1 per thousand in 1980 to 14.1 per thousand in 2000 has placed Bulgaria at the top in Europe.
- **Mortality has increased among the active population** aged 29–59. Some two thirds of deaths in 2000 were caused by diseases of blood circulation (66.3%), followed by malignant growths (13.3%) and traumas and poisoning (4%). This means that over 80% of all deaths in Bulgaria are caused by the above factors.
- **Suicide deaths** have also been on the rise, and the trend has increased since 1990. While the effect of suicides on overall mortality has not been significant, this dynamic is one of the important parameters of lifestyle, and especially the quality of life.

Declining population, changing age structure

The lower birth rate and rising death rate, as well as the emigration outflow (mostly consisting of young people of reproductive age), account for a decline in population. Population growth was already negative in 1990, and reached a loss of 5.1 per thousand in 2000. In view of the trend of the above demographic processes, continuous negative growth is leading to the depopulation of Bulgaria.

These factors have also given rise to serious changes in the age structure of the population, manifested in the *demographic ageing of the nation*. The adult population has increased in both absolute numbers and as a percentage of the population. In 1970–2000 the population of up to 14 years of age decreased from 22.7% to 15.6%, while the population over 66 years of age increased from 9.7% to 16.3%.

Morbidity

- **Mental disorders.** The number of people affected by disorders has been growing, especially those affected by alcoholic and drug addiction psychosis, alcohol dependence syndrome, schizophrenia, maniac-depressive psychosis, acute reactions to stress, adaptation reactions, and psychosomatic disorders. Mental trauma were found in every thirteenth man (7.5%) and every tenth woman (10.6%).
- **Morbidity involving temporary loss of working capacity.** According to NSI data, the most frequent ailments are acute infections of the upper respiratory system, household accidents, high blood pressure, peripheral nervous system disorders, and locomotive system disorders. In 2000, the total number of days of sick leave due to illness and everyday accidents was 11,458,161. On average, 4.94 days of sick leave were paid due to illness per person, of which 0.39 were due to accidents.
- **Morbidity involving permanent loss of working capacity (disability).** The frequency of disability cases is higher, and the main causes of permanent loss of working capacity are blood circulation disorders (27.9%), followed by malignant growths (14.5%), nervous system disorders (11.0%), mental disorders (9.3%), and traumas and poisoning (8.8%).

Higher incidence of employment accidents

The number of accidents with lethal outcome and accidents causing disability has been on the rise. The number of lost working days has also increased, both in absolute terms and on a per worker basis.

5. The Strategy of Trade Unions in Work Stress Prevention

5.1. Conditions for Strategy Development and Implementation

5.1.1. Legal framework and government programmes

The *Constitution of the Republic of Bulgaria* makes the following statement: “The workers and employees have the right to healthy and safe working conditions.”

The *Labour Code* regulates the general rights and obligations of the parties in the labour process with respect to the establishment, maintenance and observation of rules and regulations on safe and healthy working conditions. The main obligations of the employers are to provide instructions and training on the rules for safe and healthy work; special work clothes; sanitary and medical services; free food and medicines as appropriate; reduced working hours in case of hazards; regular medical examinations; annual information on safe and healthy working conditions; necessary measures for the prevention of work-related accidents; and special protection for certain categories of workers.

In 1997, parliament adopted the *Law on Healthy and Safe Working Conditions*. It started off reforms with respect to workplace health and safety, and made a step forward towards the harmonization of Bulgarian legislation with that in the European Union. The law aims at integrating all rights, obligations and responsibilities of the parties in the labour process, as well as mechanisms for a new basis to finance activities related to workplace health and safety. It provides that labour health services should be established with the purpose of working towards a reduction in the number of occupational health problems.

The *Law on Public Health* defines the major tasks and functions of the Ministry of Health and its subsidiary organizations in the field of health protection. Rules were formulated for the introduction and implementation of specific hygiene standards and requirements, as well as control mechanisms.

A programme of the Ministry of Health entitled “Health – A Right for All” defines the major issues with respect to the improvement of health in Bulgaria and ways to solve current health problems. It underlines that the economic and social conditions existing in the country for the past 12 years (a high unemployment rate of over 18%, an unbalanced structure of expenditures and consumption, smoking, alcohol and drug abuse, risky sexual behaviour, inadequate nutrition, etc.) have led to a negative impact on the health of the nation as a whole, resulting in chronic distress. One of the major goals of the programme is the improvement of mental health. In the medium term (by the end of 2002), the following goals were formulated:

- Development of specific regional programmes for prevention of the consequences of *chronic stress*
- Development of prevention and treatment schemes with respect to the social and health consequences of chronic mental disorders

The *National Programme for Mental Health 2001–2005* points out that emotional disorders in Bulgaria are widespread, but not recognized. The health care system does not have structures and programmes to alleviate emotional pain and its psychological and social consequences. The strategy aims to:

- Plan and organize training for primary health care physicians, with specific modules that enhance their sensitivity to mental health problems
- Design and implement a new concept for a database and information exchange on mental health issues.

The *National Health Strategy: Better Health for a Better Future in Bulgaria* comes to the conclusion that several negative processes are underway with respect to five major criteria for assessment of the nation’s health. This is a trend that threatens underlying biological conditions and the vitality of the nation in historical perspective, the document stresses. The impact of social and economic risk factors is also highlighted, including poverty, chronic unemployment, reduced income, an unbalanced expenditure structure, and deteriorating consumption patterns.

5.1.2. Institutional framework

The problem of workplace stress is connected with occupational health and safety. The Law on Healthy and Safe Working Conditions made provisions for the establishment of a national institutional framework. There is a National Council

on Working Conditions, as well as 18 sectoral, 28 regional and 35 municipal councils. On the local level, there are 5400 committees on working conditions.

5.1.3. Trade union density and membership

The Confederation of Independent Trade Unions in Bulgaria (CITUB) has 386,717 members and 7,484 local trade union organizations, representing 27% of all people working on the basis of employment contracts. The comparatively high trade union density of CITUB in Bulgarian enterprises and organizations (one third) is a guarantee for the observation of labour and social legislation on the one hand, and a factor for mobilizing and motivating working teams to take an active part in trade union anti-stress activities on the other.

Another potential possibility for the development and implementation of a trade union strategy for the prevention and reduction of work stress is the representation of CITUB in the committees on working conditions – about 75% include members or activists of CITUB.

CITUB notifies the regional labour inspectorates of violation of regulations on working conditions. This is a right of CITUB under the current Labour Code, and until now 633 notices have been made. The trade union is expanding its cooperation with government authorities responsible for the observation of labour legislation, which provides it with better exposure and ability to control aspects of the working environment – also with respect to sources of stress.

5.1.4. Conditions for implementation of trade union strategies at the workplace

In the sectors surveyed, *trade union density* is as follows: health care 15.7%, education 39.7%, and government administration 18.3%. The differences in organizational structure in these sectors affect the potential for trade unions to influence the reduction of stress factors. The highest potential is in education, where trade unions are seen as a stress reducing factor by 57.4% of the respondents. In health-care and public administration, these figures are a respective 38.0%, and 28.5% (annex 18).

The findings of the survey also confirm the role and influence of trade unions. In 46.6% of all cases, the *trade union organization and management have found joint solutions to emerging conflicts* (annex 19). This increases the possibilities for the

development of joint strategies on the local level to eliminate stress factors and their consequences.

Policies of employers are the major factor for the development and implementation of strategies for stress prevention at the workplace. The employer is responsible for the health and safety of the employees, as stipulated in the Labour Code. A total of 50% of all respondents indicated that management had undertaken measures to improve working conditions and the organization of work and to promote professional development. At the same time, respondents believe that such steps are not implemented with the specific intention of stress management at the workplace. Special policies in this regard were found in only in 18.7% of all cases (annex 20).

The *development of industrial democracy* may also be an important factor contributing to the alleviation of stress at the workplace. The level of information and awareness of employees in the targeted sectors is significantly high. Management has regularly informed the staff according to 55.6% of respondents in the education sector, 43.4% in health care, and 39.3% in public administration (annex 21). Employees have been involved in decision-making in 42.7% of the cases on average – the highest levels are seen in education (59.8%), followed by health care (34.4%) and government administration (31.9% – see annex 22). Having informed employees who are involved in decision-making is a guarantee for better participation of working people in alleviating and managing stress.

5.2. Trade Union Strategies for Stress Reduction and Prevention

5.2.1. National level

On the national level, CITUB undertakes activities in several directions. CITUB has *submitted a proposal for emergency measures* to the government to improve the social and economic situation in the country, which will be discussed at the National Council for Tripartite Cooperation. The implementation of the proposed measures will alleviate the negative consequences of social and economic risk factors. Furthermore, CITUB will insist on the following measures:

- The National Assembly must proceed towards the ratification of a number of ILO conventions on safe and healthy working conditions. Of prime impor-

tance for national stress prevention policy are the following: Convention No. 161 on Occupational Health Services, Convention No. 155 on Occupational Safety and Health, and Convention No. 148 on Working Environment (Air Pollution, Noise and Vibration).

- Other needed legislative steps the CITUB insists upon include the Law on the Labour Inspectorate, the allocation from the national budget of a targeted subsidy for the Working Conditions Fund (in compliance with the Law on Healthy and Safe Working Conditions), and other measures. Furthermore, amendments should be made in the current Labour Code to restore the authority of the trade unions to exercise control over the observation of labour legislation and standards on occupational health and safety, pursuant to the requirements of the European Social Charter.
- The government must develop legislation and proposals to amend existing primary and secondary legislation on the introduction of tax and customs incentives for investments. The amendments must aim at the improvement of working conditions and the prevention of hazards; strengthened control over the observation of the legislation in the area of occupational health and safety by ensuring all necessary administrative capacity to the Labour Inspectorate; and providing all necessary conditions, jointly with the National Social Security Institute, for the introduction of differentiated social security contributions from 2004 for the Employment Accidents and Occupational Diseases Fund.
- Problems related to work stress must be included in secondary legislation on risk assessment and risk prevention.
- A public debate must be launched, including all institutions and non-governmental organizations, on the *National Health Strategy: Better Health for a Better Future in Bulgaria*; and the *National Programme for Mental Health 2001–2005*. The debate should serve to map out joint measures for the improvement of national health.
- A large-scale national and regional media campaign should be implemented to trigger a public debate on the problems of work stress. Public consensus is needed that this problem exists, that it affects the entire society, and that measures are needed at every management level for the reduction and prevention of work stress.
- Under the Working Conditions Fund, resources must be allocated for work stress research, the identification of factors generating stress, and the development of targeted programmes for stress reduction and prevention.

CITUB envisages the organization of national conferences on occupational health and safety with the participation of all stakeholders – employers, government agencies, ministries, and so on. These would be followed by sectoral and regional conferences. The agenda and debates will also include the problems of work stress and proposals for legislative amendments.

In fulfilment of the decisions of the CITUB congress, a *National Association of the Committees on Working Conditions* will be established. This will make it possible to achieve a better concentration of relevant resources in terms of staff and finances, and to launch a large-scale training programme on the issues of occupational health and safety. The problem will be approached from different aspects in various educational programmes, research and prevention will be strengthened, and strategies for control and prevention will be developed.

CITUB will exercise pressure on all enterprises and agencies to comply with the Law on Healthy and Safe Working Conditions and the establishment of a system for labour health, committees and groups on working conditions.

When developing curricula for the training of medical professionals, labour health experts and social workers, universities and colleges must also include problems related to stress, its reduction, prevention and management of its implications.

Various materials will be designed and published, including training resource materials, brochures, newsletters and other materials in support of training and self-education on the issues of stress reduction and prevention, for both group and individual use.

5.2.2. Sectoral strategies

The various forms of social dialogue make it possible to undertake initiatives for stress reduction and prevention at all levels:

- When signing collective agreements at the sectoral or branch level, the respective programmes and projects should also include issues related to the specific problems of occupational health and safety. Part of the agreement should also establish inter-company, sectoral or branch labour health services.
- The sectoral and branch training programmes of committees on working conditions should also include the problems of stress. Trainees should include not only committee members, but also officials, managers, trade union members and experts in occupational health.

- During the evaluation of sectoral and branch methodologies for monitoring and risk evaluation, problems related to stress should also be considered.
- The social partners should work in cooperation and exercise joint control over the observance of rules and regulations in occupational safety and health.

5.2.3. Trade union strategy at the local level

The strategy of the trade unions at the local level should be focused on the promotion of occupational health and safety and the reduction of all risk factors, including those generating stress.

In the process of collective bargaining, the parties should undertake commitments to establish an overall system for the management of occupational health and safety, in which stress management at the workplace could be an integral part.

Certain preliminary activities should be undertaken prior to the development of the strategy. When evaluating risk at the workplace, the trade unions should also study the risk factors that generate stress together with the committees and groups on working conditions. Following the analysis, measures should be developed that eliminate the stressors. Furthermore, training should extend to all stakeholders – employers, trade unions, committees and groups on working conditions, and staff members. The information and awareness level of the staff must be increased, with a view to motivating employees to take an active part in the implementation of relevant measures, control and monitoring procedures.

In the course of negotiations and conclusion of collective agreements at the local level, relevant programmes should also be adopted for occupational health and safety, including stress prevention. Relevant measures should be mapped out for management to take regarding stress management. Prior to negotiations, employers should be obliged to submit information about working conditions, an evaluation of risks, data on the prevalence of industrial injuries and occupational diseases, and so on.

The problems of safe and healthy working conditions interact with all components of legal labour relations, and should therefore be addressed in almost all sections of the collective agreement – including conditions for staff selection and distribution according to job descriptions; cooperation of the parties to improve the organization of work; and possibilities for career growth, including training,

retraining, and continuous education. These constitute a major factor for work-force adjustment, and reduce the risk of job loss (which is the major stress factor in conditions of a high unemployment rate and distorted labour market).

Trade union programmes should contain specific measures for stress alleviation and stress prevention at the workplace among different professional and social groups. Special attention should be paid to factors that generate stress among women, as they are a segment of the work force that is influenced by a number of other factors, including family as well as specific physical and psychological characteristics (e.g. greater emotional acceptance of the environment).

Control and monitoring efforts should secure the fulfilment of measures already agreed on, and provide for feedback on their efficiency. Control should be exercised by trade unions, committees or groups on working conditions, and the workers themselves. This requires a system for information submission by the workers regarding their stress experiences, and a streamlined flow of information between trade unions, employers, committees, labour health experts, and staff. The trade unions should also exercise their functions to notify the labour inspectorates regarding violations of labour legislation, including clauses of the collective agreement, with respect to occupational safety and health.

6. Conclusions and Findings Regarding Future Research

The findings of the survey reveal that stress, with its professional, social, economic and health dimensions, constitutes a serious but underestimated problem for a society in a period of transition. National programmes at the government level do not pay sufficient attention to this alarming phenomenon. There is a great deal of evidence that there is little or no awareness about the existence of stress, or that is inadequately or inaccurately interpreted in terms of sources, manifestations and implications.

- Problems inherent to the societies in transition generate serious concern among all strata of the population and act as serious stress factors. Undoubtedly, the most significant problem is the dramatic decline of living standards.
- The budget-funded sector is subjected to strong restrictive policies that have extremely negative consequences – such as difficulty in maintaining facilities, low wages, and permanent staff reductions.
- The regional profile reveals various stress factors and different intensities, but again the major ones are unemployment, the depopulation of large areas, as well as growing crime and drug addiction.
- Work stress is high and particularly pronounced in the major professional groups of the sectors under review – teachers (6.3) and doctors (6.4). The study does not make it possible to reveal the situation at various workplaces, yet it gives a clear idea about the general level of stress.
- Work stress is generated in specific areas, such as the working environment, work organization, the professional environment and micro-climate – but the dominant factor preconditioning a high level of stress is the difficult transition process. This affects even the family, and the problems of society are transferred to the micro-level.
- An analysis of stress symptoms and reported diseases shows that the high prevalence of chronic disorders and a deteriorated psychosomatic condition result from strong chronic stress that has not been overcome. A total of 59.7%

of the survey respondents reported that they have been under stress in the most recent 12 months. Women are shown to be more susceptible to stress situations than men.

- In terms of behavioural reactions, an active approach to stress is the highly preferred solution. However, active stress management does not depend only on the individual, but also on available material and social resources. When the stress-generating factors remain beyond individual control, the only alternatives are passive stress management and unsuccessful coping strategies. Latent stress that has not been overcome then easily develops into serious distress.
- High levels of chronic stress symptoms, coping strategies and lifestyles contribute to the deterioration of psychosomatic conditions. This is also confirmed by the survey on the health status of the population of Bulgaria.
- Psycho-social stress and its consequences have a very high cost in the period of transition – e.g. low work productivity, higher morbidity and mortality, and negative demographic processes. At the workplace, the number of industrial accidents resulting in disability or death is continuously growing. The number of lost work days is growing as well, both in absolute terms and on a per capita basis.
- *National programmes and legislative initiatives for the prevention and overcoming of stress have not yet shown substantial results, and positive experiences are not yet evident. This is a result of poor coordination and low funding, among other factors.*
- The influence of trade unions and a joint solution to the problem at the workplace increase possibilities for developing basic joint strategies aimed at alleviating stress and its consequences. It is also necessary to develop training programmes, and to use and replicate the existing best practices – this may come as a natural continuation of the present project.

In view of the seriousness of the problem, it is necessary to expand the scope of the survey and cover other sectors as well. This can become a national comparative survey for *different sectors, branches and professional groups*. It would be desirable to include enterprises from the manufacturing and service sectors with different types of ownership (public, private, mixed and foreign). It would also be of interest to reflect the experience of small and micro-enterprises in the technology sector.

It would be good to realize financial, technical and expert possibilities for the implementation of objective surveys (health, psychometric and laboratory surveys). The findings, in combination with the present study, will help provide a

better and more accurate idea about the level of stress. *Case study projects would be of great value for the analysis and design of programmes in specific enterprises and companies*, with a view to applying combined research methods and introducing, with the help of management and trade unions, applied models for stress alleviation and prevention that account for specific conditions at the company level.

These types of analyses could provide convincing arguments to support the requests of unions to develop a *national programme for stress alleviation and prevention*. They could also complement the economic and social programmes of the government.

In case the scope of the survey is expanded, it would be reasonable to seek *additional sources of information* and indicators for a more precise calculation of the cost of stress for the working population, enterprises, the economy and society.

The present survey has provided rich information that makes it possible to study in even greater detail certain aspects, indicators and interdependencies. As a result, a more detailed picture of the stress situation could emerge, with regional, sectoral and occupational profiles.

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Annexes

Annex 1.

Sources of stress in the socio-economic and political environment (%)

Sources of stress	1 Very stressed	2 Partly stressed	3 No stress at all	4 There is no such problem	5 Cannot say	NA	Total
1 Political instability	54.6	35.3	4.0	2.4	2.1	1.6	100.0
2 Economic recession	84.1	12.4	0.3	0.4	1.0	1.8	100.0
3 Corruption	71.1	23.7	1.8	0.1	2.1	1.2	100.0
4 Low living standards for most of the population (low incomes, very high prices, poverty)	90.5	7.4	0.5	0.4	0.9	0.3	100.0
5 Unemployment	81.0	15.6	1.0	0.5	1.1	0.8	100.0
6 Growing crime, violence and aggression	82.2	14.7	1.0	0.8	0.7	0.6	100.0
7 Problems in health reform	65.3	28.5	1.7	1.1	2.6	0.8	100.0
8 Emigration	31.7	45.6	13.1	3.4	5.1	1.1	100.0
9 Flaws in the educational system	55.0	33.0	4.3	2.0	4.6	1.1	100.0
10 Ethnic problems in society	13.3	36.6	14.7	22.3	11.0	2.1	100.0
11 Violation of ethnic minority rights	9.7	26.9	14.6	30.8	15.3	2.7	100.0
12 Pollution of the natural environment	52.3	37.3	3.7	2.2	2.8	1.7	100.0
13 Moral crisis in society	62.3	29.5	2.9	1.3	2.9	1.1	100.0
14 Growing drug and alcohol abuse	73.2	21.3	2.8	0.7	1.3	0.7	100.0
15 Slave trade and prostitution	60.0	27.9	3.8	1.8	5.7	0.8	100.0
16 Inefficiency in the judicial system	63.3	27.1	2.2	0.7	5.2	1.5	100.0
17 Ambitions of the ruling elite to become wealthy overnight	65.7	25.7	2.9	1.4	3.5	0.8	100.0
18 Absence of penalties for committed crimes	78.7	17.2	0.8	0.7	1.7	0.9	100.0
19 Pension reform	41.4	40.6	6.4	2.7	7.7	1.2	100.0
20 Non-observance of law and public order	72.6	20.8	1.9	0.4	3.5	0.8	100.0
21 Tax policy	60.2	30.2	3.4	1.5	3.9	0.8	100.0
22 Social stratification	52.0	34.9	3.7	3.5	4.4	1.5	100.0
23 Other	6.8	0.5	0.1	-	5.1	87.5	100.0

Annex 2.
The three most serious sources of stress
in the socio-economic and political environment

Sources of stress	%
1 Political instability	13.3
2 Economic recession	41.9
3 Corruption	20.5
4 Low living standards for most of the population (low incomes, very high prices, poverty)	55.1
5 Unemployment	37.4
6 Growing crime, violence and aggression	21.9
7 Problems in health reform	20.9
8 Emigration	2.0
9 Flaws in the educational system	14.0
10 Ethnic problems in society	0.3
11 Violation of ethnic minority rights	-
12 Pollution of the natural environment	4.1
13 Moral crisis in society	13.4
14 Growing drug and alcohol abuse	9.0
15 Slave trade and prostitution	1.6
16 Inefficiency in the judicial system	4.7
17 Ambitions of the ruling elite to become wealthy overnight	3.7
18 Absence of penalties for committed crimes	7.1
19 Pension reform	4.8
20 Non-observance of law and public order	7.6
21 Tax policy	6.6
22 Social stratification	2.8
23 Other	3.0
Total	295.7

Note: Data exceed 100% because respondents provided more than one answer.

Annex 2a.
The three most serious sources of stress
in the socio-economic and political environment (% by sector)

Sources of stress	1 Health care	2 Education	3 Public administration
1 Political instability	9.2	13.5	15.5
2 Economic recession	36.9	40.1	48.5
3 Corruption	25.1	19.5	17.8
4 Low living standards for most of the population (low incomes, very high prices, poverty)	60.3	48.5	57.8
5 Unemployment	31.5	35.9	44.9
6 Growing crime, violence and aggression	20.3	21.3	22.4
7 Problems in health reform	43.1	9.3	13.9
8 Emigration	1.7	0.9	3.3
9 Flaws in the educational system	2.0	32.0	6.9
10 Ethnic problems in society	-	0.3	0.3
11 Violation of ethnic minority rights	-	-	-
12 Pollution of the natural environment	4.7	3.9	4.3
13 Moral crisis in society	12.5	13.8	13.9
14 Growing drug and alcohol abuse	8.8	10.8	7.3
15 Slave trade and prostitution	2.4	2.4	-
16 Inefficiency in the judicial system	4.7	4.2	4.6
17 Ambitions of the ruling elite to become wealthy overnight	5.4	3.6	1.3
18 Absence of penalties for committed crimes	6.1	8.1	6.4
19 Pension reform	4.7	5.1	4.6
20 Non-observance of law and public order	5.4	8.4	8.6
21 Tax policy	6.4	6.3	7.3
22 Social stratification	1.4	3.6	3.0
23 Other	2.3	3.3	4.0
Total	294.9	294.8	296.6

Note: Data exceed 100% because respondents provided more than one answer.

Annex 3.
Sources of stress in the community (%)

Sources of stress	1 Very stressed	2 Partly stressed	3 No stress at all	4 There is no such problem	5 Cannot say	NA	Total
1 High unemployment	78.2	18.2	1.2	0.8	1.0	0.6	100.0
2 Many people leave the community to seek employment elsewhere	37.8	38.3	7.5	8.0	7.2	1.2	100.0
3 Transportation problems, irregular transport	12.0	38.0	18.0	21.5	9.3	1.2	100.0
4 Poor infrastructure (street pavement, absence of street lights)	45.6	42.8	3.3	4.3	3.4	0.6	100.0
5 Insufficient number of cultural centres and remoteness of schools	7.5	20.7	11.4	49.1	9.9	1.4	100.0
6 Absence of nearby kindergartens	4.3	14.5	15.3	54.4	9.2	2.3	100.0
7 Insufficient number of health establishments, absence of a nearby health centre	11.2	20.2	9.7	52.7	5.0	1.2	100.0
8 Insufficient number of cultural establishments	14.4	31.3	11.6	34.0	7.5	1.2	100.0
9 Poor retail network	3.9	13.9	13.4	63.0	4.5	1.3	100.0
10 Growing crime, lack of security for people and property	74.2	21.2	0.9	1.9	1.2	0.6	100.0
11 Pollution of the natural environment	58.7	34.4	2.2	2.0	2.1	0.6	100.0
12 Proliferation of drugs at schools	76.5	15.2	1.0	2.2	4.1	1.0	100.0
13 Chronic deficit of municipal budget funds for social benefits	53.1	30.7	2.5	3.1	9.7	0.9	100.0
14 Other	8.2	0.3	-	0.1	4.7	86.7	100.0

Annex 4.

The three most serious sources of stress in the community (%)

Sources of stress	%
1 High unemployment	68.0
2 Many people leave the community to seek employment elsewhere	20.0
3 Transportation problems, irregular transport	6.1
4 Poor infrastructure (street pavement, absence of street lights)	29.2
5 Insufficient number of cultural centres and remoteness of schools	1.7
6 Absence of nearby kindergartens	0.3
7 Insufficient number of health establishments, absence of a nearby health centre	3.0
8 Insufficient number of cultural establishments	3.5
9 Poor retail network	0.8
10 Growing crime, lack of security for people and property	62.2
11 Pollution of the natural environment	22.9
12 Proliferation of drugs at schools	36.9
13 Chronic deficit of municipal budget funds for social benefits	22.2
14 Other	10.5
Total	287.3

Note: Data exceed 100% because respondents provided more than one answer.

Annex 4a.**The three most serious sources of stress in the community (% , by sector)**

Sources of stress	1 Health care	2 Education	3 Public administration
1 High unemployment	68.7	64.6	70.7
2 Many people leave the community to seek employment elsewhere	23.4	20.1	17.8
3 Transportation problems, irregular transport	6.2	5.2	7.1
4 Poor infrastructure (street pavement, absence of street lights)	29.6	27.4	30.0
5 Insufficient number of cultural centres and remoteness of schools	1.0	1.8	1.7
6 Absence of nearby kindergartens	-	0.9	-
7 Insufficient number of health establishments, absence of a nearby health centre	2.7	3.4	3.4
8 Insufficient number of cultural establishments	1.7	3.4	4.7
9 Poor retail network	0.7	0.3	1.7
10 Growing crime, lack of security for people and property	61.2	64.0	60.9
11 Pollution of the natural environment	23.0	21.3	24.6
12 Proliferation of drugs at schools	35.7	39.9	35.7
13 Chronic deficit of municipal budget funds for social benefits	19.2	28.4	18.5
14 Other	10.3	10.0	10.4
Total	283.4	290.7	287.2

Note: Data exceed 100% because respondents provided more than one answer.

Annex 5.
Sources of stress in the family (%)

Sources of stress	1 Very stressed	2 Partly stressed	3 No stress at all	4 There is no such problem	5 Cannot say	NA	Total
1 Child care (help with school lessons, other acvtivities)	36.4	25.2	3.1	31.7	2.7	0.9	100.0
2 The care of parents or other dependents	38.2	39.4	2.1	18.9	0.4	1.0	100.0
3 Health problems (your own or those of a family member)	42.7	39.5	2.0	13.7	1.4	0.7	100.0
4 Cases of violence in the family	3.6	4.6	6.7	82.1	2.0	1.0	100.0
5 Relations with your spouse/partner	5.5	19.2	8.7	63.7	1.6	1.3	100.0
6 Effect of workplace stress at home (home is no longer your "shelter")	18.0	42.5	6.9	30.3	1.6	0.7	100.0
7 A lack of understanding and for your job problems (no one to share them with)	10.2	32.9	7.5	46.6	2.1	0.7	100.0
8 A need to go shopping every day	18.5	31.0	15.9	30.4	2.8	1.4	100.0
9 Cooking and dish washing	16.4	34.4	13.0	33.0	1.6	1.6	100.0
10 Financial problems with respect to the upkeep of the family	64.4	27.4	1.2	5.4	1.1	0.5	100.0
11 Housekeeping (cleaning, small repairs)	12.4	37.3	15.7	32.1	1.7	0.8	100.0
12 Providing for home furnishings	27.7	40.7	8.1	19.2	2.8	1.5	100.0
13 Providing clothes for your family	40.0	43.0	3.9	11.0	1.3	0.8	100.0
14 Placing an unemployed family member at work	41.0	14.5	2.7	37.6	2.9	1.3	100.0
15 Fear that a family member may lose their job	58.4	25.8	2.4	11.0	1.7	0.7	100.0
16 Continuation of education (yours or that of a family member)	38.6	23.4	4.5	29.4	2.7	1.4	100.0
17 Other	2.6	0.3	-	0.8	4.6	91.7	100.0

Annex 6.
The three most serious sources of stress in the family (%)

Sources of stress	%
1 Child care (help with school lessons, other activities)	23.5
2 The care of parents or other dependents	23.9
3 Health problems (your own or those of a family member)	37.7
4 Cases of violence in the family	1.4
5 Relations with your spouse/partner	2.9
6 Effect of workplace stress at home (home is no longer your “shelter”)	11.4
7 A lack of understanding and support for your job problems (no one to share them with)	5.0
8 A need to go shopping every day	3.7
9 Cooking and dish washing	2.7
10 Financial problems with respect to the upkeep of the family	68.6
11 Housekeeping (cleaning, small repairs)	2.1
12 Providing for home furnishings	4.9
13 Providing clothes for your family	8.2
14 Placing an unemployed family member at work	21.5
15 Fear that a family member may lose their job	43.0
16 Continuation of education (yours or that of a family member)	21.5
17 Other	2.2
Total	284.2

Note: Data exceed 100% because respondents provided more than one answer.

Annex 6a.

The three most serious sources of stress in the family (% , by sector)

Sources of stress	1 Health care	2 Education	3 Public administration
1 Child care (help with school lessons, other activities)	24.6	23.1	22.5
2 The care of parents or other dependents	23.9	21.5	27.3
3 Health problems (your own or those of a family member)	31.7	40.6	37.9
4 Cases of violence in the family	2.1	0.9	1.4
5 Relations with your spouse/partner	1.8	2.2	4.4
6 Effect of workplace stress at home (home is no longer your “shelter”)	11.6	9.2	13.0
7. A lack of understanding and support for your job problems (no one to share them with)	7.0	4.3	4.1
8 A need to go shopping every day	4.6	3.7	3.1
9 Cooking and dish washing	2.1	2.8	3.4
10 Financial problems with respect to the upkeep of the family	65.8	75.4	64.2
11 Housekeeping (cleaning, small repairs)	1.1	2.8	2.0
12 Providing for home furnishings	6.0	4.3	4.8
13 Providing clothes for your family	8.5	10.8	4.8
14 Placing an unemployed family member at work	19.0	20.0	24.9
15 Fear that a family member may lose their job	47.2	42.5	40.3
16 Continuation of education (yours or that of a family member)	27.5	19.4	19.8
17 Other	1.1	1.8	3.7
Total	285.6	285.3	281.6

Note: Data exceed 100% because respondents provided more than one answer.

Annex 7. Influence of the specific work environment (%)

	Physical load*				Psychological load*				Stress factor	Source of pleasure
	1	2	3	4	1	2	3	4		
1	9	26	47	18	11	22	50	17	33.9	66.1
2	7	37	42	14	16	32	38	14	45.9	54.1
3	14	45	30	11	27	44	21	9	58.7	41.3
4	14	27	30	29	15	30	29	27	52.9	47.1
5	25	28	25	22	30	30	20	21	77.9	22.1
6	9	30	38	23	10	30	39	22	60.7	39.3
7	13	32	35	20	11	31	38	19	60.8	39.2
8	10	13	20	56	14	13	20	54	76.0	24.0
9	7	19	25	49	12	20	22	46	82.7	17.3
10	15	29	26	30	22	31	20	27	88.8	11.2
12	3	3	32	63	4	3	30	63	70.8	29.2
13	4	14	30	52	5	13	30	52	37.2	62.8
14	12	34	35	19	16	33	33	18	66.7	33.3
15	11	9	17	64	13	10	16	61	74.4	25.6
16	10	21	15	54	12	20	15	53	70.2	29.8
17	7	21	19	53	10	21	17	52	70.6	29.4
18	31	39	18	13	37	39	13	11	74.9	25.1
19	18	23	21	38	19	27	18	36	84.0	16.0
20	10	23	20	47	12	23	19	46	72.0	28.0
21	11	20	21	48	12	23	19	46	78.3	21.7
22	10	31	20	40	13	22	18	47	83.6	16.4
23	10	28	20	41	10	31	20	38	80.9	19.1
24	15	30	21	35	12	29	20	40	82.0	18.0
25	24	35	15	27	14	31	22	33	87.2	12.8
26	31	37	13	19	25	35	15	25	91.1	8.9
27	32	37	13	18	54	19	5	22	88.9	11.1

1 = I am greatly stressed 2 = I am partly (bearably) stressed 3 = I am not stressed at all by this 4 = Not relevant to me or my work place

Annex 7a.

Major stressors in the working environment

Stressor	Men (% of respondents	Women (% of respondents	Total % of respondents	χ^2	p	v^2
Lack of funds, materials, consumables, etc	19.8	22.4	21.7	3.853	.050	.077
Poor facilities	19.8	21.6	21.2	2.492	.114	.065
Noise	13.6	22.5	20.6	12.612	.000	.136
Working with many people	20.9	20.4	20.5	8.499	.004	.109
Psychological abuse	10.2	14.9	13.9	7.612	.006	.111
Understaffing	13.6	9.1	10.0	13.192	.000	.156
Working with a specific target group	9.0	6.7	7.1	-	-	-

Annex 8. Influence of various elements of workplace organization (%)

	Physical load*				Psychological load*				Stress factor	Source of pleasure
	1	2	3	4	1	2	3	4		
1 Frequent changes in shifts or people in shifts	4	18	17	61	6	19	15	60	76.6	23.4
2 Impossible to use breaks during the working time	11	26	17	47	14	26	17	43	78.0	22.0
3 Too many administrative formalities, excessive paperwork	36	43	8	13	43	41	6	11	91.4	8.6
4 More duties than required by job description (additional, untypical work)	27	38	14	21	33	37	12	18	82.5	17.5
5 Short deadlines, frequent state of emergency	30	40	12	18	36	38	10	16	88.2	11.8
6 New technology introduced to rationalize work	11	33	25	31	10	37	21	32	51.2	48.8
7 Staff is not trained to handle new technologies (self-learning only)	11	29	17	43	16	29	13	41	76.9	23.1
8 New work methods introduced frequently	10	36	21	33	14	35	19	31	70.6	29.4
9 Continuously growing quality demands	24	44	17	16	27	45	13	15	73.2	26.8
10 Assignments sometimes involve contradictory requirements	20	37	16	27	27	38	11	24	89.1	10.9
11 Quality suffers due to short deadlines, causing frustration	21	48	13	19	28	48	8	16	92.5	7.5
12 Other (please specify)	29	37	3	32	56	10	7	27	100.0	

1 = I am greatly stressed 2 = I am partly (bearably) stressed 3 = I am not stressed at all by this 4 = Not relevant to me or my work place

Annex 8a.
Major stressors in work organization

Stressor	Men (% of respondents	Women (% of respondents	Total % of respondents	χ^2	p	v^2
Too many administrative formalities, excessive paperwork	25.8	20.2	44.7	5.992	.018	.088
Short deadlines	39.4	36.7	37.3	3.407	.065	.070
Assignments sometimes involve contradictory requirements	27.7	28.1	28.0	14.916	.000	.155
Quality suffers due to short deadlines	22.6	21.8	22.0	2.667	.102	.063
More duties than required by job description	25.8	20.2	21.4	7.776	.005	.110
Continuously growing quality demands	9.0	9.3	9.2	11.197	.001	.134
New work methods introduced frequently	6.5	9.8	9.1	5.165	.023	.098

Annex 9.
Influence of various elements of the professional environment

	Yes	No	Stress factor	Source of pleasure
1 I give everything of myself because my profession is my vocation	90.0	10.0	24.2	75.8
2 I try to perform well because I appreciate the usefulness of the job	97.6	2.4	18.8	81.2
3 I am doing my best to protect the prestige of the profession	96.4	3.6	23.9	76.1
4 I receive recognition for my efforts and my competence	52.0	48.0	46.6	53.4
5 Remuneration corresponds to performance	21.2	78.8	81.1	18.9
6 The position I hold corresponds to my skill level	85.9	14.1	22.2	77.8
7 Career growth depends on the quality of work and higher skill levels	49.1	50.9	59.4	40.6
8 I am overloaded with work	59.0	41.0	66.4	33.6
9 My job requires a high skill level	72.4	27.6	57.5	42.5
10 My job is primarily intellectual (listening, analysis, judgment)	83.5	16.5	51.6	48.4
11 I have to make independent decisions and take responsibility	81.3	18.7	61.4	38.6
12 There are incentives for skills improvement	45.8	54.2	51.6	48.4
13 There is gender inequality with respect to career growth	8.1	91.9	60.9	39.1
14 I am responsible for other people	71.2	28.8	70.7	29.3
15 My job is void of meaning	6.2	93.8	46.8	53.2
16 I do not have enough work and I feel useless	5.0	95.0	50.9	49.1
17 Other (specify)	50.0	50.0	73.9	26.1

Annex 9a.

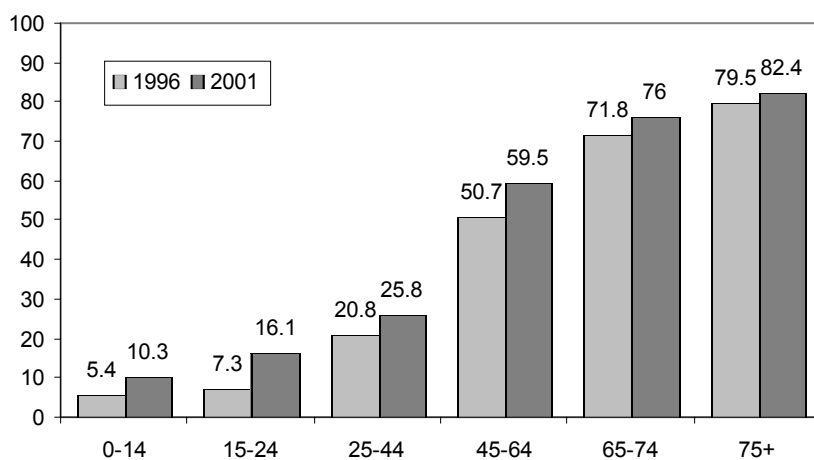
Major stressors in task design and job contents

Stressor	Men (% of respondents	Women (% of respondents	Total % of respondents	χ^2	p	v^2
Remuneration does not correspond to performance	20.4	29.0	27.3	7.646	.006	.100
Excessive workload	19.7	23.6	22.8	2.073	.150	.053
Responsibility for other people	25.9	19.4	20.7	.735	.391	.033
Independent decisions required	17.7	12.5	13.6	.409	.522	.023
No recognition of efforts	12.9	13.4	13.3	.068	.794	.009
Work is predominantly intellectual	8.8	12.5	11.7	.079	.779	.010
Work complexity	10.2	10.4	10.3	2.061	.151	.054
Lack of development potential	12.2	8.5	9.2	-	-	-

Annex 10.
Influence of the micro-climate (%)

	Yes	No	Stress factor	Source of pleasure
1 I can express my opinion freely without fearing harm	58.2	41.8	47.1	52.9
2 Loyalty is appreciated and encouraged	55.8	44.2	48.3	51.7
3 In difficult situations I have the support of my colleagues	73.5	26.5	34.8	65.2
4 When needed I may count on the support of my direct supervisor	71.1	28.9	38.5	61.5
5 I am certain that if I share something with my colleagues this will not harm me	54.2	45.8	51.9	48.1
6 There are "friendly circles" in our team	74.5	25.5	51.7	48.3
7 Relations between supervisors and staff are good	72.4	27.6	36.6	63.4
8 Problems are discussed as a group	63.7	36.3	44.7	55.3
9 A job well done receives public appreciation	51.8	48.2	46.0	54.0
10 There is good human resource management, and people motivated to perform well	37.2	62.8	63.3	36.7
11 I can advance in my career without conflict in my own value system or personality	49.6	50.4	51.5	48.5
12 My job allows me to communicate with my colleagues	94.6	5.4	9.3	90.7
13 I feel isolated from my colleagues	7.1	92.9	44.8	55.2
14 Personal records of workers are confidential	38.9	61.1	55.4	44.6
15 Other (specify)	44.4	55.6	61.9	38.1

Annex 11.
Persons with impaired health (%)



Source: NSI, 2002

Annex 12.
Population over 15 years of age
with self-reported "good" and "very good" health (%)

United Kingdom	85.0
Denmark	80.5
Netherlands	78.4
Sweden	75.1
Austria	70.2
France	67.2
Finland	66.9
Spain	66.5
Italy	60.1
Bulgaria	55.5
Germany	45.2
Portugal	30.5

*Reports from health surveys in the period 1990–1995.

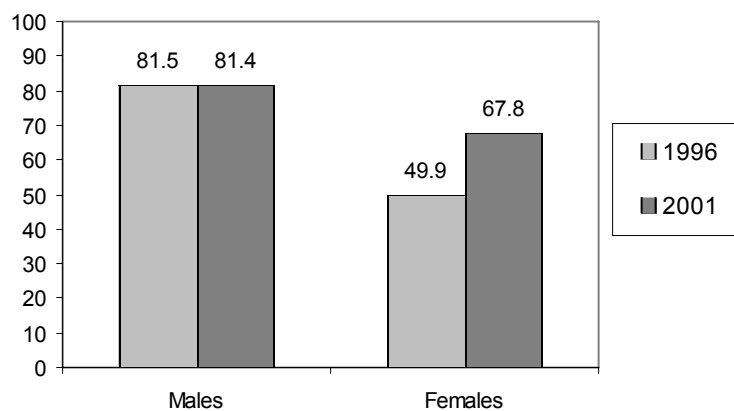
Sources: NSI 2002; Health indicators, Fourth Evaluation in Spain of the European Regional Health for All Programme, 1999.

Annex 13.
Persons suffering from major chronic diseases (%)

	Total	Gender		Age						
		M	F	0-14	15-24	25-44	45-64	65-74	75+	
High blood pressure (hypertension)	1996	22.8	18.9	26.3	0.4	1.8	12.1	46.4	28.4	10.9
	2001	21.3	18.3	24.4	0.2	1.5	13.0	44.2	27.7	13.4
Heart attack	2001	1.8	2.3	1.2	-	0.6	4.2	41.6	37.5	16.1
Brain stroke	1996	2.0	2.5	1.6	0.0	0.3	6.5	34.6	38.6	20.0
	2001	2.7	3.1	2.2	2.0	0.4	6.8	33.2	38.8	18.8
Migraine and frequent headache	2001	13.0	7.4	18.5	1.6	7.5	31.3	37.6	14.7	7.3
Continuous anxiety and depression	2001	8.1	6.2	10.1	1.0	5.8	26.6	40.7	16.3	9.5
Arthrosis and arthritis	2001	7.5	5.0	10.0	0.6	0.8	10.2	38.7	29.9	19.8
Chronic bronchitis	1996	7.6	7.0	8.2	11.8	5.8	15.9	35.5	21.5	9.5
	2001	6.5	6.0	6.9	9.5	4.9	14.2	34.6	24.8	12.0
Ulcer	1996	7.9	9.3	6.6	0.5	3.5	25.1	44.4	19.1	7.4
	2001	6.3	7.3	5.4	0.7	1.7	25.4	44.9	19.1	8.3
Allergies	2001	5.2	3.8	6.5	12.0	9.7	26.6	34.2	12.2	5.4
Diabetes	1996	3.6	2.9	4.2	0.2	1.6	6.0	42.8	35.4	14.0
	2001	3.5	2.8	4.1	1.2	1.5	9.9	38.1	34.8	14.5
Asthma	2001	2.7	2.4	3.0	11.0	7.9	12.6	30.3	26.0	12.2
Chronic dermatological diseases	1996	3.0	2.8	3.3	4.0	7.5	25.2	38.8	15.5	9.0
	2001	2.5	2.0	3.0	6.0	7.3	27.5	37.3	11.2	10.7
porosis	2001	1.8	0.8	2.8	1.8	-	8.3	41.1	27.1	21.8
r	2001	0.8	0.5	1.2	-	-	10.1	35.5	32.9	21.5

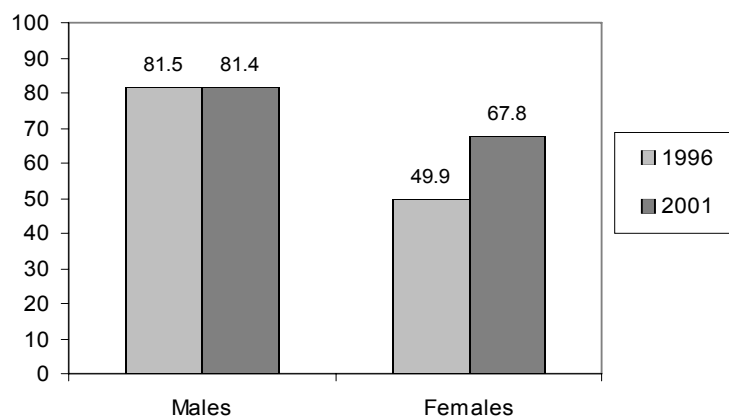
Reports from the survey in 1996 are referred to for diseases surveyed in March 2001
: NSI, 2002

Annex 14.
Tobacco smoking in Bulgaria (%)



Source: NSI, 2002

Annex 15.
Alcohol consumption in Bulgaria (%)



Source: NSI, 2002

Annex 16.
Physical activity among the population over five years of age (%)

	High		Medium		Low	
	1996	2001	1996	2001	1996	2001
Total	5.2	4.0	59.2	55.9	35.6	40.1
Gender						
Males	7.7	4.5	60.5	57.9	31.9	37.6
Females	3.1	3.4	58.0	53.9	38.9	42.8
Age						
5-14	14.8	9.4	53.1	53.1	32.1	37.6
15-24	18.7	9.6	52.3	52.2	29.0	38.2
25-44	2.0	3.3	61.9	54.7	36.1	42.0
45-64	-	1.1	68.1	60.3	31.9	38.6
65-74	-	0.9	56.6	58.0	43.4	41.4
75+	-	-	36.2	51.8	63.8	48.2
Locality						
Sofia	6.9	6.8	49.0	45.2	44.1	48.0
Towns	6.25	4.8	56.8	52.6	37.0	42.7
Villages	2.8	1.7	68.1	65.3	29.1	33.1

Source: NSI, 2002

Annex 17.
Life expectancy in good health in Bulgaria (%)

Age	Males				Females			
	Median longevity		Life expectancy in good health		Median longevity		Life expectancy in good health	
	1996	2001	1996	2001	1996	2001	1996	2001
15-19	53.84	54.30	46.12	45.38	60.88	61.11	48.21	47.24
20-24	49.07	49.51	41.50	40.71	56.02	56.23	43.51	42.50
25-29	44.37	44.80	36.93	36.18	51.16	51.36	38.87	37.83
30-34	39.68	40.08	32.40	31.65	46.33	46.52	34.19	33.35
35-39	35.05	35.43	27.98	27.13	41.51	41.71	29.62	28.75
40-44	30.58	30.91	23.66	22.84	36.76	36.96	25.13	24.46
45-49	26.35	26.61	19.64	18.78	32.11	32.31	20.91	20.24
50-54	22.40	22.65	15.87	14.93	27.58	27.77	16.86	16.26
55-59	18.74	19.01	12.42	11.86	23.16	23.37	12.96	12.54
60-64	15.38	15.63	9.27	8.83	18.98	19.17	9.59	9.06
65-69	12.32	12.61	6.56	6.05	15.05	15.20	6.57	6.20
70-74	9.48	9.80	4.28	4.03	11.46	11.58	3.90	3.72
75-79	7.05	7.40	2.57	2.37	8.45	8.44	2.29	1.95
80+	5.16	5.49	1.15	1.35	5.95	5.89	1.02	0.97

Source: NSI, 2002

Annex 18.
Responses to the statement:
**“The availability of a trade union organization is itself
a stress reducing factor” (%)**

	Health care	Education	Administration	Total
Yes	38.0%	57.4%	28.5%	42.0%
No	43.7%	29.2%	44.4%	38.7%
Don't know	18.3%	13.4%	27.1%	19.4%

Annex 19.
Responses to the statement:
**“All emerging conflicts are resolved jointly
by the trade union organization and management” (%)**

	Health care	Education	Administration	Total
Yes	47.5%	61.9%	28.4%	46.6%
No	33.1%	22.9%	45.2%	33.3%
Don't know	19.4%	15.2%	26.4%	20.1%

Annex 20.
Responses to the statement:
“Management implements special policies to handle workplace stress” (%)

	Health care	Education	Administration	Total
Yes	21.3%	21.3%	13.2%	18.7%
No	59.8%	58.3%	61.0%	59.6%
Don't know	18.9%	20.4%	25.8%	21.6%

Annex 21.

Responses to the statement:

“Management briefs the employees on all issues on a regular basis” (%)

	Health care	Education	Administration	Total
Yes	43.4%	55.6%	39.3%	46.5%
No	47.9%	35.0%	48.8%	43.5%
Don't know	8.7%	9.4%	11.9%	10.0%

Annex 22.

Responses to the statement:

“Employees can participate in decision-making” (%)

	Health care	Education	Administration	Total
Yes	34.4%	59.8%	31.9%	42.7%
No	57.2%	34.7%	53.2%	47.8%
Don't know	8.4%	5.5%	14.9%	9.5%

Appendix

Appendix 1.
Questionnaire used in survey

INTERNATIONAL LABOR ORGANIZATION

INSTITUTE FOR SOCIAL AND TRADE UNION RESEARCH AT CITUB

QUESTIONNAIRE

SOCIOLOGICAL SURVEY

“WORKPLACE STRESS IN THE CONDITIONS OF TRANSITION”

1. For over 10 years now we have been living in the conditions of transition. The changes in social and economic life have generated many problems, which have affected all of us. What is the personal impact upon you of the following factors:

(One answer per each line)

1. I am very much concerned
2. I am partly concerned
3. I am not concerned at all
4. This is not a problem / there is no such problem
5. I cannot say

A Political instability	1	2	3	4	5
B Economic recession	1	2	3	4	5
C Corruption	1	2	3	4	5
D Low living standards for most of the population (low incomes, very high prices, poverty)	1	2	3	4	5
E Unemployment	1	2	3	4	5
F Growing crime, violence and aggression	1	2	3	4	5
G Problems in health reform	1	2	3	4	5
H Emigration	1	2	3	4	5
I Flaws in the educational system	1	2	3	4	5
J Ethnic problems in society	1	2	3	4	5
K Violation of ethnic minority rights	1	2	3	4	5
L Pollution of the natural environment	1	2	3	4	5
M Moral crisis in society	1	2	3	4	5

N	Growing drug and alcohol abuse	1	2	3	4	5
O	Slave trade and prostitution	1	2	3	4	5
P	Inefficiency in the judicial system	1	2	3	4	5
Q	Ambitions of the ruling elite to become wealthy overnight	1	2	3	4	5
R	Absence of penalties for committed crimes	1	2	3	4	5
S	Pension reform	1	2	3	4	5
T	Non-observance of law and public order	1	2	3	4	5
U	Tax policy	1	2	3	4	5
V	Social stratification	1	2	3	4	5
W	Other (please specify)	1	2	3	4	5

2. Please specify up to three social problems that have affected you most strongly on a personal level or which bother you most?

(Please indicate the letters under question No. 1, or give a free answer)

- 1
- 2
- 3

3. What kind of problems are you faced with in your community? How concerned are you with each of them?

(One answer per line)

1. I am very much concerned
2. I am partly concerned
3. I am not concerned at all
4. This is not a problem / there is no such problem
5. I cannot say

A	High unemployment	1	2	3	4	5
B	Many people leave the community to seek employment elsewhere	1	2	3	4	5
C	Transportation problems, irregular transport	1	2	3	4	5
D	Poor infrastructure (street pavement, absence of street lights)	1	2	3	4	5
E	Insufficient number of cultural centres and remoteness of schools	1	2	3	4	5
F	Absence of nearby kindergartens	1	2	3	4	5
G	Insufficient number of health establishments, absence of a nearby health centre	1	2	3	4	5
H	Insufficient number of cultural establishments	1	2	3	4	5
I	Poor retail network	1	2	3	4	5

J	Growing crime, lack of security for people and property	1	2	3	4	5
K	Pollution of the natural environment	1	2	3	4	5
L	Proliferation of drugs at schools	1	2	3	4	5
M	Chronic deficit of municipal budget funds for social benefits	1	2	3	4	5
N	Other (please specify)	1	2	3	4	5

4. Please specify up to three social problems in your community that affect you most strongly on a daily basis?

(Please indicate the letters under question No. 3, or give a free answer)

- 1
- 2
- 3

5. The problems we face in society have an inevitable impact on the family. How stressed do you feel in your daily life by:

(One answer per line)

- 1. Very stressed
- 2. Partly (bearably) stressed
- 3. Not stressed at all
- 4. There is no such problem
- 5. I cannot say

A	Child care (help with school lessons, other activities)	1	2	3	4	5
B	The care of parents or other dependents	1	2	3	4	5
C	Health problems (your own or those of a family member)	1	2	3	4	5
D	Cases of violence in the family	1	2	3	4	5
E	Relations with your spouse/partner	1	2	3	4	5
F	Effect of workplace stress at home (home is no longer your "shelter")	1	2	3	4	5
G	A lack of understanding and support for your job problems (no one to share them with)	1	2	3	4	5
H	A need to go shopping every day	1	2	3	4	5
I	Cooking and dish washing	1	2	3	4	5
J	Financial problems with respect to the upkeep of the family	1	2	3	4	5
K	Housekeeping (cleaning, small repairs)	1	2	3	4	5
L	Providing for home furnishings	1	2	3	4	5
M	Providing clothes for your family	1	2	3	4	5
N	Placing an unemployed family member at work	1	2	3	4	5

O	Fear that a family member may lose their job	1	2	3	4	5
P	Continuation of education (yours or that of a family member)	1	2	3	4	5
Q	Other (please specify)	1	2	3	4	5

6. Please share the nature of your three biggest and most serious family problems.

(Please indicate the letters under question No. 5, or give a free answer)

- 1
- 2
- 3

7. How stressed do you feel because of additional activities?

(One answer for each line in column A, using the scale, plus one answer in column B)

- 1. Very stressed
- 2. Partly (bearably) stressed
- 3. Not stressed at all
- 4. There is no such problem
- 5. I cannot say

	A					B		
	I am stressed:					This is	This is a source	
						a stress factor	of pleasure	
A	Club activities (music, sports, hunting, fishing)	1	2	3	4	5	1	2
B	Trade union work at the workplace	1	2	3	4	5	1	2
C	Trade union work outside the workplace	1	2	3	4	5	1	2
D	Political activity	1	2	3	4	5	1	2
E	Additional work at another workplace (company)	1	2	3	4	5	1	2
F	Additional work at two or more workplaces (companies)	1	2	3	4	5	1	2
G	Other activities (religious, etc.)	1	2	3	4	5	1	2

8. What is your area of work?

(One answer only)

- 1 Health care
- 2 Education
- 3 Public administration (central or municipal government)
- 4 Other

9. In which sector?

(One answer only)

- 1 Public
- 2 Municipal
- 3 Private

10. How are your labour relations settled with your employer?

(One answer only)

- 1 Employment contract with a probation period
- 2 Fixed-term employment contract (for several months)
- 3 Employment contract with no fixed term
- 4 Contract under civil law
- 5 Other (please specify)
- 6 There are no such arrangements, I have no contract
- 7 I am self-employed

11. Do you have social and health insurance?

(One answer only)

- 1 My employer makes social security contributions for me on the basis of my gross salary
- 2 My employer makes social security contributions for me on the basis of the minimum wage
- 3 I make my own social security contributions
- 4 I am not insured
- 5 I do not know

12. Do you receive your monthly pay regularly?

- 1 Yes
- 2 No

13. If you do not receive your monthly pay on a regular basis, how long is the delay in the majority of cases?

(One answer only)

- 1 1 month
- 2 2 months
- 3 3 months
- 4 Over 3 months
- 5 I receive my pay on a regular basis

14. What is your position in the work hierarchy?

(One answer only)

- 1 Manager (any level)
- 2 Staff

15. Each sector has a specific work environment. How are you influenced by components of this environment at your workplace?

(For A and B, one answer per line, using the given scale)

- A. To what extent are you stressed by each factor *physically*?
- B. To what extent are you stressed by each factor *psychologically* (mentally)?
(For C, one answer only – “1” or “2”)
- C. Is the named item a rather a stress factor *or* a source of pleasure?

1. I am greatly stressed
2. I am partly stressed (bearably)
3. I am not stressed at all by this
4. Not relevant to me/my work place

	A. Physical stress	B. Psychological (mental) stress	C. Stress factor	D. It is a source of pleasure
A Commuting to work	1 2 3 4	1 2 3 4	1	2
B Work posture / method	1 2 3 4	1 2 3 4	1	2
C Imposed pace of work	1 2 3 4	1 2 3 4	1	2
D Noise	1 2 3 4	1 2 3 4	1	2
E Lighting				
F Temperature in the work premises	1 2 3 4	1 2 3 4	1	2
G Work with toxic substances and hazardous activities	1 2 3 4	1 2 3 4	1	2
H Risk of physical abuse	1 2 3 4	1 2 3 4	1	2
I Psychological harassment and abuse	1 2 3 4	1 2 3 4	1	2
J Sexual harassment	1 2 3 4	1 2 3 4	1	2
K Frequent business trips	1 2 3 4	1 2 3 4	1	2
L Length of working time	1 2 3 4	1 2 3 4	1	2
M Working time in conflict with biological rhythms (night work, shifts)	1 2 3 4	1 2 3 4	1	2
N Working time in conflict with social rhythms (Saturdays and Sundays)	1 2 3 4	1 2 3 4	1	2
O Rolling schedule of work (according to volume of work and deadlines)	1 2 3 4	1 2 3 4	1	2

P	Working with too many people or in isolation	1	2	3	4	1	2	3	4	1	2
Q	Understaffing due to small payroll	1	2	3	4	1	2	3	4	1	2
R	Overtime work	1	2	3	4	1	2	3	4	1	2
S	Impossibility to use compensation	1	2	3	4	1	2	3	4	1	2
T	Absence of ergonomic conditions	1	2	3	4	1	2	3	4	1	2
U	Poor sanitary or hygienic conditions	1	2	3	4	1	2	3	4	1	2
V	Polluted air and cigarette smoke	1	2	3	4	1	2	3	4	1	2
W	Poor facilities	1	2	3	4	1	2	3	4	1	2
X	Lack of funds, materials, consumables, etc.	1	2	3	4	1	2	3	4	1	2
Y	Other (please specify)	1	2	3	4	1	2	3	4	1	2

16. Please specify three specific features of your workplace that are the most frequent stress generators for you?

(Please define them freely)

- 1
- 2
- 3

17. What steps have been undertaken by management in the most recent 12 months to improve the working environment?

(Please indicate no more than three such steps)

- 1
- 2
- 3

18. What is the impact of the different elements of workplace organization on you?

(For A and B, one answer per line, using the given scale)

- A. To what extent are you stressed by each factor *physically*?
- B. To what extent are you stressed by each factor *psychologically* (mentally)?
(For C, one answer only – “1” or “2”)
- C. Is the named item a rather a stress factor *or* a source of pleasure?

- 1. I am greatly stressed
- 2. I am partly (bearably) stressed
- 3. I am not stressed at all by this
- 4. Not relevant to me or my work place

	A. Physical stress	B. Psychological (mental) stress	C. Stress factor	D. It is a source of pleasure
A Frequent changes in shifts or people in shifts	1 2 3 4	1 2 3 4	1	2
B Impossible to use breaks during the working time	1 2 3 4	1 2 3 4	1	2
C Too many administrative formalities, excessive paperwork	1 2 3 4	1 2 3 4	1	2
D More duties than required by job description (additional, untypical work)	1 2 3 4	1 2 3 4	1	2
E Short deadlines, frequent state of emergency	1 2 3 4	1 2 3 4	1	2
F New technology introduced to rationalize work				
G Staff is not trained to handle new technologies (self-learning only)	1 2 3 4	1 2 3 4	1	2

H	New work methods introduced frequently	1	2	3	4	1	2	3	4	1	2
I	Continuously growing quality demands	1	2	3	4	1	2	3	4	1	2
J	Assignments sometimes involve contradictory requirements	1	2	3	4	1	2	3	4	1	2
K	Quality suffers due to short deadlines, causing frustration	1	2	3	4	1	2	3	4	1	2
L	Other (please specify)	1	2	3	4	1	2	3	4	1	2

19. Please specify up to three elements of work organization that are the most frequent stress generators for you at your workplace?

(Please define them freely)

- 1
- 2
- 3

20. What steps have been undertaken by management in the most recent 12 months to improve the organization of work?

(Please, indicate up to three such steps)

- 1
- 2
- 3

21. The efforts to achieve professional accomplishment and advancement affect one's physical and mental health. What impact do the following components of the working environment have upon you?

(One answer each in categories A and B)

	A		B	
	Yes	No	C. Stress factor	C. Source of pleasure
A I give everything of myself because my profession is my vocation	1	2	1	2
B I try to perform well because I appreciate the usefulness of the job	1	2	1	2
C I am doing my best to protect the prestige of the profession	1	2	1	2
D I receive recognition for my efforts and my competence	1	2	1	2
E Remuneration corresponds to performance	1	2	1	2
F The position I hold corresponds to my skill level	1	2	1	2
G Career growth depends on the quality of work and higher skill levels	1	2	1	2
J I am overloaded with work	1	2	1	2
I My job requires a high skill level	1	2	1	2
J My job is primarily intellectual (listening, analysis, judgment)	1	2	1	2
K I have to make independent decisions and take responsibility	1	2	1	2
L There are incentives for skills improvement	1	2	1	2
M There is gender inequality with respect to career growth	1	2	1	2

N I am responsible for other people	1	2	1	2
O My job is void of meaning	1	2	1	2
P I do not have enough work and I feel useless	1	2	1	2
Q Other (specify)	1	2	1	2

22. Which are the three major sources of stress for you in your career development?

(Please specify them freely)

- 1
- 2
- 3

23. What is management doing for the career development of the staff?

(Indicate up to three significant steps during the past 12 months)

- 1
- 2
- 3

24. You will probably agree that one feels more comfortable and can work in a more creative manner when there are good working relations. How do you perceive the specific situation at your workplace? What is its impact on you?

(Indicate one answer for each A and B)

	A		B	
	Yes	No	Stress factor	Source of pleasure
A I can express my opinion freely without fearing harm	1	2	1	2
B Loyalty is appreciated and encouraged	1	2	1	2
C In difficult situations I have the support of my colleagues	1	2	1	2

D	When needed I may count on the support of my direct supervisor	1	2	1	2
E	I am certain that if I share something with my colleagues this will not harm me	1	2	1	2
F	I feel secure at my work place	1	2	1	2
G	There are "friendly circles" in our team	1	2	1	2
H	Relations between supervisors and staff are good	1	2	1	2
I	Problems are discussed as a group	1	2	1	2
J	A job well done receives public appreciation	1	2	1	2
K	There is good human resource management, and people are motivated to perform well	1	2	1	2
L	I can advance in my career without conflict in my own value system or personality	1	2	1	2
M	My job allows me to communicate with my colleagues	1	2	1	2
N	I feel isolated from my colleagues	1	2	1	2
O	Personal records of workers are confidential	1	2	1	2
P	Other (please specify)	1	2	1	2
	1	2	1	2

25. Have you ever felt discriminated against at your workplace due to:

- 01 Gender
- 02 Age
- 03 Education
- 04 Ethnic affiliation

- 05 Political beliefs
- 06 Religion
- 07 Trade union membership
- 08 Disability
- 09 Other (specify)
- 10 No, I have not been discriminated against

26. Under what circumstances have you been discriminated against?

- 01 Appointment to work
- 02 Appointment to a particular workplace
- 03 Improvement of skills
- 04 Promotion
- 05 Salary
- 06 Other
- 07 I have not been discriminated against

27. Please indicate if you agree or disagree with the following statements?

(One answer per line)

	Yes	No	Don't know
A We have a trade union organization or organizations	1	2	3
B Anyone can become a trade union member if they want to	1	2	3
C There is a ban on trade union work	1	2	3
D The availability of a trade union organization is itself a stress reducing factor	1	2	3
E All emerging conflicts are resolved jointly by the trade union organization and management	1	2	3
F Management briefs the employees on all issues on a regular basis	1	2	3
G Employees can participate in decision-making	1	2	3
H Management implements special policies to handle workplace stress	1	2	3

28. Are you a member of a trade union organization?

(One answer only)

- 1 Yes, at my workplace
- 2 Yes, outside of my workplace
- 3 No, I am not

29. Are you a trade union activist?

(One answer only)

- 1. Yes, at my workplace
- 2. Yes, outside of my workplace
- 3. No, I am not

30. Imagine a typical working day. How do you usually feel at the end of the day?

(One answer only per line)

	Yes	Sometimes	No
A I am generally tired	1	2	3
B I feel back pain	1	2	3
C My muscles (joints) ache	1	2	3
D I have a headache	1	2	3
E I am irritable or aggressive	1	2	3
F I have eye problems	1	2	3
G I have vertigo	1	2	3
H My limbs are stiff	1	2	3
I My stomach feels sore or bloated	1	2	3
J I have chest or heart pain	1	2	3
K I breathe heavily	1	2	3
L I constantly think about work, everywhere and all the time	1	2	3
M I feel depressed and indifferent	1	2	3
N I suffer from insomnia or cannot sleep well	1	2	3
O I get tired more easily than I would like to	1	2	3
P I suffer from diarrhoea	1	2	3
Q I wake up already tired in the morning	1	2	3
R Other (specify)	1	2	3

31. Would you define yourself as a resilient person to stressful situations?

(One answer only)

- 1 Categorically yes. I feel psychologically stable even in most critical situations.
- 2 Not entirely. Some situations do not affect me, but in others I may not feel stable.
- 3 Categorically no. I am an emotional personality, and am psychologically unstable in critical circumstances.
- 4 I cannot say.

32. You have probably experienced stressful situations. How do you manage them?

(Check every correct answer)

- 01 I use validol, valerian or herbs
- 02 I use sleeping pills and/or tranquilizers
- 03 I go for a walk outdoors
- 04 I smoke more
- 05 I find comfort in alcohol
- 06 I share my experiences with friend(s)
- 07 I seek and find support from my family
- 08 I turn to work and start working at a much higher pace
- 09 I seek and find support from my colleagues
- 10 Other (specify)
- 11 I do nothing, I adopt a wait and see attitude
- 12 I have never been in a stressful situation

33. Have you used leave from work over the past 12 months due to work stress?

(One answer only)

- 1 Yes, I have used sick leave
- 2 Yes, I have used paid leave
- 3 Yes, I have used unpaid leave
- 4 No, I have not used leave, despite the stress
- 5 No, I have not been in a stressful situation

34. Do you work at a computer?

(One answer only)

- 1 Yes, up to one hour per day
- 2 Yes, 1–2 hours per day
- 3 Yes, 3–4 hours per day
- 4 Yes, 5 or more hours per day
- 5 No, I do not

35. How would you define your current lifestyle?

(One answer only)

- 1 Absolutely healthy
- 2 Rather healthy
- 3 Neither healthy nor unhealthy
- 4 Rather unhealthy
- 5 Absolutely unhealthy
- 6 I do not know, cannot say

36. Have you ever had any of the following medical conditions?

(One answer per line)

	Yes	No
A Cardiovascular disease (heart insufficiency, ischemic heart disease, heart auricle disturbance, arterial hypertension)	1	2
B Oncological disease	1	2
C Pulmonary disease (tuberculosis, bronchial asthma, etc.)	1	2
D Endocrine disease (diabetes, thyroid condition, etc.)	1	2
E Psychiatric conditions or addictions (depression, alcoholism, drug addiction)	1	2
F Epilepsy, Parkinson's disease	1	2
G Locomotion disorders (slipped disc, coxarthrosis, rheumatism)	1	2
H Gastrointestinal disease (ulcer, gastritis, gall bladder troubles)	1	2
I Conditions of sensory organs (eyes, ears)	1	2
J Diseases of the nervous system	1	2
K Other chronic disorders (please specify)		
.....	1	2
L Pregnancy	1	2

37. Do you belong to a recognized disability group?

- 1 Yes
- 2 I have submitted an application, but I have not yet been classified in a disability group
- 3 I am not disabled

DEMOGRAPHIC CHARACTERISTICS

38. Gender

- 1 Male
- 2 Female

39. Age

(Write down in numbers)

I am years of age

- 99 Do not wish to answer

40. What is the highest level of your completed education?

(One answer only)

- 1 Lower than primary
- 2 Primary
- 3 Basic
- 4 Secondary general
- 5 Secondary special
- 6 College
- 7 University

41. Marital status

(One answer only)

- 1 Single
- 2 Married or living with a partner
- 3 Divorced
- 4 Widow, widower

42. Ethnic group

(One answer only)

- 1 Bulgarian
- 2 Turkish
- 3 Muslim Bulgarian
- 4 Romani (gypsy)
- 5 Other (specify)

43. What is your current profession?

- 1

44. How many persons does your household consist of?

(Total number, including yourself)

..... persons

45. Are there any unemployed persons in your household?

(Write down in numbers)

Yes,..... person(s)

- 1 No, there are no unemployed persons in my household

46. How many children below the age of 18 are in your household?

(Write their number below)

..... children

- 1 There are no children below 18 years of age in my household.

47. What was the income of your family in the past month (salaries, pension benefits, stipends, etc.)?

(Please, review the scale below and indicate the income group to which you belong)

- 01 Below BGL 99
- 02 BGL 100–199
- 03 BGL 200–299
- 04 BGL 300–399
- 05 BGL 400–499
- 06 BGL 500–599
- 07 BGL 600–699
- 08 BGL 700–799
- 09 BGL 800–899
- 10 BGL 900–999
- 11 Above BGL 1000

Thank you for participating in this survey. Your contribution is appreciated!

Appendix 2.
Methodological notes with respect to the grading of variables

The instrument of the study included *three types of models* with respect to the variables:

1. An ordinary 5-grade scale (questions 1, 3 and 5 on the questionnaire). The number of points in the formation of the grade is determined as follows:

Variable or code of response	1	2	3	4	5
Number of points for grading the variable	10	7	5	0	0

2. A combination of two 4-grade scales for physical and mental pressure, plus a dichotomic scale for the direction of the influence of the variables (questions 15 and 18 on the questionnaire). The number of points in the formation of the grade is as follows:

Variable or code of response	1	2	3	4	1	2	3	4	1	2
Number of points for grading the variable	4	3	2	0	4	3	2	0	2	1

3. A combination of a dichotomic scale for evaluation of a statement (positive or negative) plus a dichotomic scale for the direction of influence of the variable (questions 21–24 on the questionnaire). Points are awarded for grading the variable as follows:

Variable or code of response	1	2	1	2
Number of points for grading the variable	2 (6)*	6 (2)*	4	2

* Either 2 or 6 points are awarded, depending on the type of variable (statement) and the research hypothesis pursued.

The group and integral measurements of the level of stress were calculated as average mathematical values from the grades of the various variables.