

Stress and stress-management in entrepreneurial activity in Russia

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About the authors

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Abstract

This study explores questions of psychological health, sources of stress and coping with a sample of entrepreneurs in Russia. The research was carried out as part of an educational project aiming to teach entrepreneurs how to manage fundamentals of management; including how to deal with issues of stress management. On the basis of our findings we make practical recommendations for individuals and suggest the effective use of stress management methods.

Introduction

In Russia entrepreneurship exists as a social-economic phenomenon for less than 20 years. However, entrepreneurs stand out as a special social group with, as many researchers have pointed, specific psychological characteristics (Chirikova, 1999; McClelland, 1987; Maslikova, 2001; Philinkova, 2007; Pozdnyakov, 2001). These characteristics are: a) the ability to define goals and reach them, using strategies of active search; b) the ability to make optimal choices (Pozdnyakov, 2001); c) adequate self-concept and a yearning for self-development, self-actualisation, and internal locus of control (Maslikova, 2001); d) self-confidence and assurance of their mission, ability to act effectively in conflict or risky situations, ability to make fast and optimal decisions and uphold their viewpoint (Chirikova, 1999); and e) a high level of

achievement motivation (McClelland, 1987). Even in the description of the classical term of entrepreneur as *an owner of capital who runs the risk of realising some commercial idea and making profit* (Adam Smith, 1776); we can see the inherent characteristics of readiness to take risks, innovating, and action orientation.

Entrepreneurial activity has been associated with both high psychological and emotional stresses (Bogdanova & Dotsenko, 2010) often due to the large number of actions that an entrepreneur needs to achieve each day. This is described as *Tasks for Action* (Bogdanova & Dotsenko, 2010); a need tension state often experienced as a difficulty that requires removal. Decisions need to be taken between the various motivational alternatives of action that are subjectively perceived as doubtful. Therefore, the need for entrepreneurial stress resistance and mature defence and survival systems are critical for entrepreneurs.

In the entrepreneurial environment in many cultures several failures of survival systems can be seen: alcoholism, compulsive gambling, psychosomatic problems, and downshifting. The high level of alcohol ingestion is one of the top priority problems in Russia today as it causes in excess of 700,000 of deaths annually. Examination of national statistics (Civic Chamber of the Russian Federation, 2009) reveals that people who abuse alcohol are not always in a low income category of the population; but can be successful, wealthy entrepreneurs who choose alcohol as a popular and quite acceptable way of coping with stress.

Psychosomatic disorders, mainly cardio-vascular conditions are typical for the individual with the “Type A” personality; having such characteristic features as: impatience, ambitiousness, along with high capacity for work, strong need to assert themselves and striving for success (Friedman & Rosenman, 1959). “Type-A” behaviours are typical for many entrepreneurs.

The strategy of downshifting was first mentioned in the USA by Saltzman (1991); but is a new phenomenon for Russia. This strategy abandons the need for high profits and stressful activities for greater mental comfort, self-actualisation and family life. More recently downshifting has been reported as a stress coping strategy in Great Britain, Australia; in addition to the USA (Saltzman, 1991). Researchers understand downshifting as a defensive mechanism against occupational stress that endangers the health and self-identity of a person. We see downshifting as a coping strategy or defence enabling a person to adapt to their life circumstances. However, it is difficult to measure the level of effectiveness of downshifting as this will vary in each individual according to their circumstances.

Stress issues in the entrepreneurial environment are often mentioned in the Russian media describing high informational load, competitiveness, fast-paced market requirements, environmental changes, strategic discontinuities and disequilibrium. Stress-management training is in high demand aiming to control mental practices (e.g., techniques such as yoga enabling self-regulation of psychological and physiological state). However, Russian research has only so far investigated theoretical aspects of entrepreneurial stress; such as: a) a synthesis of medical-psychological and economic approaches in the research of entrepreneurial stress (Vlah, 2011); and b) different aspects of stress being associated with success, responsible attitude and personal maturity (Pozdnyakov, Pozdnyakova & Tihomirova, 2012).

Managerial stress has been examined with Russian samples (Leonova & Kachina, 2007; Leonova, Kuznetsova & Barabanshchikova, 2010; Kobozoev, 2011a, Kobozoev, 2011b); but to date this work has concentrated on risk factors and psychological defence and coping strategies of managers. However, there are relatively few empirical studies of entrepreneurial stress, stress factors and stress management with Russian samples. We wanted to investigate the sources of stress and to understand how entrepreneurs perceived these stressors. To help us appreciate the field of entrepreneurial stress we investigated the literature.

Literature review

Rauch (2007) examined the relationship between strain, performance and survival of small-scale business ventures finding strain a positive predictor of long-term survival of small businesses. This counter-intuitive finding may be explained by the Attraction-Selection-Attrition (ASA) theory suggesting persons attracted by, selected into, and persisting in entrepreneurship may be relatively high in capacity to tolerate and effectively manage stress (Robert, Franklin & Hmielesk, 2013). The authors indicate that entrepreneurs' relatively low levels of stress derive, at least in part, from high levels of self-efficacy, optimism, hope, and resilience often seen in entrepreneurial samples.

Some studies suggest that self-employed individuals experience a greater variety of emotions at work than those who are in direct employment. For instance, a study by Patzelt & Shepherd (2011) suggests self-employed persons may be more susceptible than employees to negative emotions such as stress, fear of failure, loneliness, mental strain, and grief. The authors draw on the role requirements literature to develop a model of career pursuit based on individuals' willingness and abilities to regulate these emotions. Using a nation-wide survey of more than 2,700 US citizens the authors show that over and above the effects of positive emotions self-employed workers experience fewer negative emotions than those who are employed, contingent on their regulatory coping behaviours. However, a European survey showed that self-employed workers have higher levels of stress, overall fatigue, anxiety, irritability (*European Foundation for the Improvement of Living and Working Conditions, 2006*). In our research we want to clarify if there are real contradictions in these data or if we can find some reasonable explanation(s) for the differences.

Buttner (1992) examined sources of stress and outcomes with a sample of entrepreneurs and managers in mid and upper level organizational roles. Entrepreneurs reported higher levels of role ambiguity and health problems and lower satisfaction with work compared to their managerial counterparts. But,

managers' reported more role conflict. This study examined the moderating role of personality type, tension discharge rate, and social support on the relationship between stress sources, entrepreneurial health and job satisfaction. Buttner suggests that the entrepreneur who relies on others' for support may experience less stress. On the other hand, entrepreneurs tend to be more independent; having a lower need for support than the general population, suggesting they rely less on others for advice and information. This study found the pressure of responsibility was (marginally) positively related to the frequency of health problems.

Buttner also investigated stress resistance associated with personality (Type A and B, identified by Friedman & Rosenman, 1974). Type A personality is characterised by aggressiveness, hostility, a sense of urgency, impatience, and achievement orientation, and its opposite, Type B is characterised by a more relaxed, slower paced and less hurried disposition. This study showed that while the ability to discharge tension may reduce entrepreneurs' health problems, it did not lessen the impact of the stressors measured in the study. Buttner, concluded that entrepreneurs' independence and low need for support may override any influence that external sources of support might have in reducing stress.

A Malaysian study (Ahmad & Xavier, 2010) offers empirical evidence of the sources of stress among entrepreneurs; and their associated coping mechanisms. An anonymous, self-administered survey was distributed to a sample of 118 entrepreneurs in various business industries. Results show that 'business skills required', 'work pressure', 'high expectation of others' and 'responsibilities' were among the main elements that generated stress in this population. The authors concluded that entrepreneurial work needs to be properly organised and individuals' emotions kept under control in order to reduce unnecessary factors that might create stress.

Grant & Ferris (2012) comment on a lack of systematic research on the sources of stress and scant attention to the identification and measurement of occupational stressors in both the entrepreneurship literature and the stress literature more

generally. Their study combined deductive methods (literature searches) and inductive methods (focus groups and interviews with 45 entrepreneurs) to identify common and salient sources of occupational stress in entrepreneurs' daily working lives. Content analysis of data produced nine main categories of stressors and 30 subcategories of these broader dimensions. These findings were then used to generate an initial item pool for a new measure of occupational stressors, specific to entrepreneurs described as the Sources of Entrepreneurial Stress Scale (SESS). The authors argued that the development of valid measures of entrepreneurial stressors would assist the understanding of occupational stress and entrepreneurship. We were not able to use the SESS in our research as there is, at present, no adopted Russian version.

While exploring the literature we also carried out a review of the relevant stress measures that are used in Russia; described below:

- Holmes and Rahe Stress Scale, a check list of 43 stressful life events that can contribute to illness (Holmes & Rahe 1967);
- Kurt Tepperwein's method of Personal Stress Profile (Tepperwein, 1997) was based on the PSM-25 Scale (Lemyre, Tessier & Fillion, 1988) measuring the phenomenological structure of the stress experience. This scale consists of 25 somatic, behavioural and emotional characteristics that was initially developed in France, and further adopted and validated in England, Spain and Japan. A Russian version of this measure was then developed (Vodoianova, 2009);
- Tubesing's method of detecting the optimal level of emotional arousal in a stress situation, offers a way of measuring stress-reduction techniques. This is a projective method revealing preferred strategies used to overcome individual stressors. It is possible to estimate the effectiveness of each strategy and revise appropriate coping strategies: by dropping ineffective strategies and learning new ones;
- Association of specific overt behaviour patterns with blood and cardiovascular findings (more popular as a method of detecting Type A and B personalities Friedman & Rosenman, 1959);

- The “Tiredness – Satiation – Stress” or DORS method is a popular measure of employee stress used in Russia (Leonova & Velichkovskaya, 2002);
- Evaluation the level of labour hardness in different types of professional activities (Plath & Richter, 1984) suggests differential diagnostics of capacity for work degradation states. The Job Stress Survey (JSS, Spielberger, 1989) has been adapted for use in Russia (Leonova, & Kachina, 2007). The JSS has two parts, with 30 statements in each, describing work stress-factors in terms of their force (first part) and frequency of influence (second part). We choose the JSS for our study as it measures professional stress in groups; rather than a general notion of stress. Certain JSS items required development enabling use with an entrepreneurial sample (e.g., lack of management support and struggle for career).

In general, we found that the main available, adopted and validated methods of stress diagnostics in Russia examine a rather general notion of stress (e.g., Holmes and Rahe Stress Scale) or lack specificity associated with the entrepreneurial experience.

Setting the research agenda

In spite of evidence of numerous failures of the personality survival system and the great social need for its minimisation; our understanding of entrepreneurial stress and coping is underdeveloped. Further, our review shows that systematic research on the sources of entrepreneurial stress is lacking. We are also aware that simple stress management interventions aimed at dealing with one particular stressor (such as time management) are not effective. Bogdanova and Dotzenko suggest that an interventional approach enabling people to develop adaptive defences towards psychosomatic reactions, while boosting coping resources, would be beneficial. This method is illustrated in the 5-step anti-stress programme described by Samoukina (2011) and formed a useful basis for our work with entrepreneurs.

Our examination of stress measures found a lack of instruments with the specificity to examine entrepreneurial stress. In our own consulting psychological practice, we

too face the absence of a sharp instrument for the measurement of entrepreneurial stress. This problem stimulated us to modify the stress factors, appropriate for employees in the JSS (Spielberger, 1989); making them appropriate and clear for entrepreneurs. The description of this process and its results follows.

Method

Sample

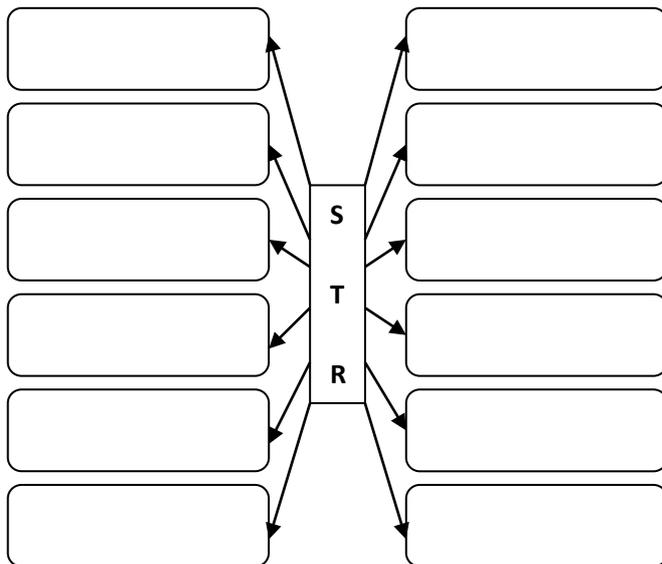
The sample consisted of 90 entrepreneurs owning small or micro-business companies working in groups of 20 to 25 persons. All of the entrepreneurs participated in a stress-management training programme where they were taught skills to manage their stress. As part of their educational and developmental process, they were trained on how to identify their sources of stress and received feedback from a trainer along with individual stress-management recommendations.

All participants consented to have their data used anonymously for the purposes of the current research. Surveys were completed during training sessions when the entrepreneurs were given all the necessary instructions to complete the survey and had the opportunity to clarify any questions with the instructor. Thus, we were able to achieve a 100% response rate to the survey. Once the surveys were completed training focused on responses to self-identified sources of stress. Feedback was given to all participants by email one-week later along with recommendations for stress reduction.

Measures

We used a projective method “Stress Card” (Bogdanova & Dotsenko, 2010) to investigate stressors (see Figure 1 below). We asked participants to describe up to 12 areas of their work that cause them stress and to label the “windows” of the Card with the most significant stress factors they face in the process of their entrepreneurial activity.

Figure 1: The Stress Card



After completing the Card, participants were asked to estimate how able they were to manage each stress factor (by marking each stress factor “+”, if they were able to manage, or, “-” if they felt they could not influence the stress factor).

For example, stress factors may be: a) “Lack of time, we can’t dispatch orders in time”; b) “My employees are not thorough enough, sometimes I have to do things by myself”; c) “Customers’ payments delays”; d) “I get tired from work so much, that I don’t have any energy for my family”; e) “I have so many things to do, that I can’t concentrate”. Factors 1 and 5 may be considered as manageable and given a “+” while factors 2, 3 and 4 were seen as non-manageable and given a “-”.

In addition, we modified the Russian version of the JSS by adopting the following statements (see Table 1 below) for items 1, 2, 5, 9, 13, 17-21, 28-30 to ensure they were more appropriate for an entrepreneurial sample.

Each item was assessed by: a) severity using a nine-point rating scale assessing the perceived severity of the stressor event (with 1 being “low level” and 9 being “high level”); and b) frequency rating asking respondents to indicate on a 0 – 9 times-a-day scale, how often each event occurred during the preceding six months. The survey had standard instructions explaining how to answer the questions. In total, 30 work-related stressor events were rated for severity and frequency.

Table 1: JSS modification for entrepreneurial work

Item	Original JSS version	Modified formulation of the item
1	Assignment of disagreeable duties	Unpleasant circumstance; contradicting obligations
2	Working overtime	Work is not limited by working day
5	Fellow workers not doing their jobs	Partners and/or employees neglect their duties
9	Performing tasks not in job description	Performing tasks don't correspondence to the main professional responsibilities
13	Difficulty getting along with supervisor	Difficulties in relationships with higher authorities
17	Personal insult from customer/consumer/colleague	Offence, personal insult from client/ customer /consumer /partner
18	Lack of participation in policy-making decisions	Lack of devotion to planning and making policy-making decisions
19	Inadequate salary	Inadequate reward for work
20	Competition for advancement	Strive for market promotion
21	Poor or inadequate supervision	Absence of good reliable assistants
28	Covering work for another employee	Necessity to make work for unskilled or negligent employees
29	Poorly motivated coworkers	Poorly motivated employees
30	Conflicts with other department	Conflicts with other department

Data considering gender, age, entrepreneurial experience, entrepreneurial effectiveness, sphere of business activity and business motivation were collected. For example, Entrepreneurial Effectiveness was investigated by asking “Do you consider yourself to be an effective entrepreneur? Estimate with the help of ten-point system” (0 indicating the respondent considered themselves to be completely unsuccessful and 10 indicating the person considered themselves maximally successful). Business Motivation was revealed by asking: a) “For what reasons did I create my business?” and b) “What is the mission of my company?”

Analyses

Data obtained from the Stress Card was content analysed by five Subject Matter Experts (SMEs, both academics and entrepreneurs) who distributed factors into categories of stressors. SMEs agreed logical rules of priority so that each stressor could not be counted in more than one category. Manageability of stress factors was calculated as a quantity (minimal manageable value of 0 points, and maximal value of 12 points). For example, if a respondent marked five items as manageable (by “+” sign) in the personal Stress Cards; they scored 5 points.

Respondents rated the JSS stress sources by their severity and frequency (as recommended by the Russian version of the JSS). The extent to which a stressor has influence (Influence Extent, see Table 4) is calculated by multiplying the rating of Stressor frequency (estimated by on a nine-point scale) and the rating of its severity (nine-point scale). This calculation allowed us to rank the stressors for this population of entrepreneurs.

Results

Seven responses were excluded from the research, as they were not fully completed; resulting in 83 completed surveys (response rate 92.2%).

The mean age of respondents was 34.2 years; females made up the majority of the sample (62%) and the average entrepreneurial experience was approximately four years. A majority of the entrepreneurs worked in Service, Trade and manufacturing businesses (see Table 2 below).

Table 2: Spheres of entrepreneurial activity

Spheres of entrepreneurial activity	Percentage distribution
Trade	22.22 %
Catering	2.78 %
Services	34.72 %
Designing	2,.78 %
Insurance	1.39 %
Education	1.39 %
Manufacturing	16.67 %
Advertising	5.56 %
Tourism	2.78 %
Agriculture	4.17 %

Entrepreneurial aims

Participants describe five entrepreneurial aims: profit, process, self-actualisation, independency, and social value (see Table 3 below). We found no differences in frequency of stress sources or mean Influence Extent among different entrepreneurial groups with different aims. Therefore, irrespective of the type of business aims those entrepreneurs' pursue (for money or for people), their stressors are similar.

Table 3: Entrepreneurial aims

% of Respondents	Aim	Content
30.36	Money	Work for profit
3.57	Process	Work for process, itself
39.29	Self-actualisation	Business is self-actualisation
19.64	Independency	Entrepreneurship to gain financial, other independency
7.14	People	Activity directed at being useful for others

Demographic influences

A negative correlation was found between stress frequency and age ($r = -0.525$, $p \leq 0.01$); regardless of gender. Therefore, the older entrepreneurs perceived that they faced a lower number of stressful situations.

Sources of stress (Stress Card)

Seven basic sources of stress were identified and confirmed by SMEs (see Table 4 below): Time, Subordinates, Finance, Communication difficulties, Neglect of Duties, Client Issues and Failures.

Table 4: Categories of stress sources

Stress sources	Freq*	Stress Sources in descending order of frequency
Unit 1. Time	56	Tight time for large workload; urgency of certain tasks; lack of time for own self-regard; and acceptance of own inability to manage time. Inequality of workload and excess of free time Underutilisation of time.

Unit 2. Subordinates	44	Lazy, careless, failing, and delaying putting orders of the manager into practice; lacking knowledge and skills to perform duties. Communication and conflict with subordinate.
Unit 3. Finance	35	Lack of money, debts, delays in payments being made to them, the world economic crisis, falling profits and difficulties paying salaries of employees.
Unit 4. Communication difficulties	34	Non-conflictual communication (without any clear indication of how, whom and where these conflicts arise). Difficulties in relation to: Subordinates, Clients, Partners, and Family.
Unit 5. Neglect of duties (by company partners and employees)	29	Stressful situations develop, when partners are let down by suppliers; have to wait long periods for payments, and when others default on their contractual commitments.
Unit 6. Client Issues	23	Entrepreneurs often described their problem clients as being "inadequate"; resulting in conflict, aggression, and resulting in incompatible interactions
Unit 7. Failures (covers situations from total failure to trivial daily disorders of performance)	23	Failure situations are stressful, needing additional resources to resolve issues taking them away from planned work.

*Number of participants noting this category on their Stress Card.

Sources of stress (JSS)

The JSS reveals a further set of stress sources ranked by mean Influence Extent (IE). This was calculated by multiplying the rating of stressor frequency (estimated by a nine-point scale) and the rating of its severity (estimated by nine-point scale).

The JSS rankings' identify which stress factors have the highest Influence Extent (Responsibility, Deadlines, Interruptions, Neglect of Duties, and Crises). However, there are only small differences in mean group Influence Extent.

Table 5: JSS stress sources categories and mean Influence Extent

Rank	Mean IE	Stress sources
1	34	11 . Assignment of increased responsibility
2	32	26. Strict deadline of work execution
3=	29	23. Regular interruptions and distractions from work
3=	29	5. Partners and/or employees neglect their duties

3=	29	7. Dealing with crisis situations
6	28	20. Strive for market promotion
7	27	2. Work is not limited by working day
8=	26	6. Lack of support and/or obstacles from higher authorities
8=	26	21. Absence of good reliable assistants
10=	25	16. Making critical on-the-spot decisions
10=	23	28. Necessity to make work for unskilled or negligent employees
10=	23	4. Assignment of new or unfamiliar duties
13	23	19. Inadequate reward for work
14=	22	27. Absence/lack of time to satisfying personal needs and rest
14=	22	25. Overloading with documentation and additional information
14=	22	3. Lack of opportunity for advancement
17=	21	12. Periods of inactivity
17=	21	29. Poorly motivated employees
17=	20	8. Lack of recognition for good work
20	20	15. Insufficient personnel to handle an assignment
21	19	24. Transition from periods of involuntary idleness to intensive work
22	19	9. Performing tasks don't correspondence to the main professional responsibilities
23	18	17. Offence, personal insult from client/ customer/consumer/partner.
24=	17	13. Difficulties in relationships with higher authorities
24=	17	1. Unpleasant circumstances and contradicting obligations
26	16	30. Conflicts inside company (between departments, branches)
27=	15	18. Lack of devotion to planning and making policy-making decisions
27=	15	10. Inadequate or poor quality equipment
29	14	22. Presence of noise and extraneous interferences in working areas
30	11	14. Experiencing negative attitudes toward the organization

Combining information from Stress Card and JSS

Our analyses show some partial overlap between these two methods: *Time* and *Failure* difficulties, connected with *Subordinates* and *Partners*. However, some categories were unique to one of the methods. The Stress Card revealed the categories of *Finance*, *Communication* and *Clients* and they are not shown in the

JSS. The JSS identified additional stress categories of *Responsibility* and *Challenge* not seen on the Stress Card.

SMEs combined stress sources from JSS into the more general categories of the Stress Card categories (such as *Time*, *Subordinates*, *Finance*, *Communication difficulties*, *Neglect of duties*, *Clients*, *Failures*). This confirmed two new high ranking categories of *Responsibility* (highest source of stress: assigning increased responsibility to another) and *Challenge* (third highest source of stress: dealing with crisis situations) that had not appeared on the Stress Card.

Entrepreneurial Effectiveness and stress management

Respondents self-rated their entrepreneurial effectiveness (0 to 10) and their abilities to manage each stressor (0 to 12).

Entrepreneurial Effectiveness

We compared the ratings of entrepreneurs who considered themselves effective (a high rating on the scale) with those who give a low rating to their level of effectiveness. While these groups did not differ on average Influence Extent there were differences in the frequency of stress situations (U-test empirical = 205, 207; $p \leq 0.05$) indicating that those entrepreneurs who consider themselves as effective notice more events as tense and stressful than those who rate themselves as non-successful entrepreneurs.

Ability to manage stress and Entrepreneurial Effectiveness

Further correlational analyses to examine the relationship between manageability of stressors and the subjective assessment of Entrepreneurial Effectiveness revealed a moderate positive correlation between extent of manageable stressors and entrepreneurial successfulness ($r = 0.62$, $p \leq 0.01$). Hence it appears that successful

entrepreneurs feel that they are capable to manage difficulties, whereas those who perceive themselves to be unsuccessful feel less equipped to manage stressful situations.

Summary of findings

Our study shows that entrepreneurs are most stressed by *Responsibility* and *Challenge* along with *Finance*, *Communication* and *Clients*. *Time* stressor became the most important reason of entrepreneurial stress according to a projective analysis of stress sources (Stress Card). We will now describe the stress management training offered to the entrepreneurs.

Stress Management Training

Participants were given feedback regarding their sources of stress and offered additional training based on their most common sources of stress.

Entrepreneurs with a high number of *Time* stressors were encouraged to take additional individual and group training on time-management and delegation of authority.

Those with high numbers of *Subordinates* stressors were offered conflict management training, personnel diagnostics, selection, assessment and development training. In addition, team-building training was employed to increase the level of mutual loyalty and trust; contributing towards building positive and constructive interpersonal and work communications. In particular, employer and employees were encouraged to alter their perception to each other by moving their vision of a stress source from the *person* to the *process*. We recommended additional education about organizational psychology and management courses in order to optimise business processes.

Respondents reporting high levels of the stressor *Finance* were offered psychological training to reduce irrational attitudes (or perceptions) of money along with economic courses to increase financial competence.

Entrepreneurs reporting *Communication Difficulties* were offered training in effective communication and conflict management. Further if the stressor *Neglect of Duties* was reported entrepreneurs were offered training on effective communication and management.

In order to decrease the influence of the *Clients* stressor entrepreneurs were offered both stress management and client-centered management training; including an appreciation of emotional intelligence and social roles. Entrepreneurs frequently asked for training and development to enable them to work better with problem clients. Probably this issue needs to be included in future stress management training programmes.

Finally, those who reported *Failures* as a stress factor were offered general training about the perception of failure (such as positive thinking, increasing resilience, and creative thinking) along with individual consulting work over each problem case. The next section will examine the findings from this study.

Discussion

This study has shown that it is necessary to use both projective and standardised methods of identifying stressors in order to gain a full picture of the stresses experienced by entrepreneurs. Both of these methods gave information about individual sources of stress that then enabled us to formulate appropriate stress management training courses. The JSS survey allowed us to identify the stress factors with the strongest influence on entrepreneurs (*Assignment of increased responsibility to another*, *Strict deadline of work execution*, *Regular interruptions and distractions from work*; *Partners and/or employees neglect their duties*, *Dealing with crisis situations*). The projective method showed similar categories in a slightly different order (*Time*, *Subordinates*, and *Neglect of duties*), additional stressors (*Finance*, *Communication Difficulties* and *Clients*) and two new categories of stressors *Challenge* and *Responsibility*.

Differences in stressor identification can be connected with limitations of the JSS method. The format of the JSS questions direct the respondent to definite questions and answers; where the Stress Card encourages respondents to formulate their own sources of stress. However, if respondents only generated their own stress sources

(the Stress card was used alone) certain aspects of entrepreneurial life that may have not been considered. Therefore we suggest for a full picture of stress factors experienced by entrepreneurs both self-report and projective methods should be used.

It is interesting to note that *Responsibility* (i.e., “Assigning increased responsibility to another”) was ranked by the JSS survey as the strongest source of stress but was not noted on the Stress card. We see several possible reasons of not noting *Responsibility* on the Stress Card and they, of course, need further testing and research. One reason could be a defensive neglect strategy; making it difficult for entrepreneurs to admit weakness. Further, admission or expression of the burden of responsibility is not socially approved of in the business world. Another possible reason is the complexity of meaning of the word responsibility, which entrepreneurs may perceive as too abstract and complex a category; preferring to note on the Stress Card more concrete factors that cause them stress. But, when the respondent sees questions relating to the *Responsibility* factor in JSS they are able to recognise these issues as important complex stress factors. In addition, the *Challenge* stress factor (dealing with crisis situations) may be too general a formulation that the majority of entrepreneurs will agree with. But, when respondents are asked to formulate stress sources themselves they describe concrete notions that have more individual meaning.

Our research builds on the work of Buttner (1992) demonstrating the importance of other stress factors, in addition to the pressure of responsibility. This information can be taken into account in developing stress management training programmes and tuning them to work with more concrete stress sources that are common for entrepreneurs.

Our study revealed that irrespective of the type of business aims (be they for money; or for people); entrepreneurs' stressors are similar. Thus, we suppose that entrepreneurial stressors are mostly connected with entrepreneurial activities and are not governed by the motives of starting their own businesses.

Further, we demonstrated that the older the entrepreneur becomes the less they tend to notice stressful situations. This may relate to the entrepreneurs' abilities of

resilience, stress-resistance and hardiness that are likely to be acquired with many years of business experience. Probably they have already faced a number of stressful situations and are able to predict the consequences and actions' of others allowing them to choose appropriate behaviours and make quick decisions without added stress. New problems or situations may be perceived as interesting and developing strategies or actions to combat the problem may be seen as new challenges. Also we can suppose, that their entrepreneurial life experience allows them to have more "healthy" life priorities (involving interest in their family, personal health, and self-development); rather than solely focusing on business. This suggests that the experienced entrepreneurs can achieve more emotional dissociation while solving work problems or managing their emotions, when facing problematic work situations.

The study results lead us to conclude that successful entrepreneurs note a greater quantity of stressful situations; while at the same time they feel capable to manage these difficulties. Further, entrepreneurs who perceive themselves as successful are more likely to report that they are better able to adjust their attitudes and behaviours in stressful situations. Unsuccessful entrepreneurs are more likely to note less stressful situations, or may ignore some situation that could potentially cause them stress; as they suppose they are unable to manage these issues. Therefore, by accumulating unsolved problems over time this may lead to a perception of lack of effectiveness as an entrepreneur. So, we conclude that successful entrepreneurs are more likely to notice events as stressful and that such reflection may help them to manage these situations with a constructive form of coping. Non-successful entrepreneurs in this case demonstrate type of negative defence; they "try not to notice disturbing things". In this finding we saw some common points with the findings of Rauch's (2007) research which found a positive relationship between strain and long-term survival of small businesses. These findings correspond to the Attraction -Selection-Attrition (ASA) theory that suggests persons are attracted by, selected into, and persisting in entrepreneurship may be relatively high in capacity to tolerate and effectively manage stress (Robert, Franklin & Hmielesk, 2013).

Our research aimed to investigate the nature of sources of stress for entrepreneurs and we clarified that successful entrepreneurs are more likely to identify more events

as stressful; thus allowing them to solve problems with “open eyes”, and not ignore them. From that, it follows that training focusing on teaching entrepreneurs how to identify problems, predict consequences and prevent crises from developing can increase the attentiveness of less than successful entrepreneurs; building their logical and analytical abilities and therefore, their level of control over problems and business effectiveness.

Our research has enabled us to explore some contradictions between the stressor experienced by employees and those that are self-employed. As we noted in the literature review there is some unexplained contradictions between the results of several studies, devoted to the comparison of entrepreneurial stress and employees' stress. The study of Patzelt and Shepherd (2011) based on a nation-wide survey of more than 2,700 US citizens showed that self-employed workers experienced fewer negative emotions than those who are employed. However, a few years earlier a European survey (*European Working Conditions Survey, 2006*) showed that self-employed workers experienced higher levels of stress, overall fatigue, anxiety, and irritability when compared to those in direct employment. Our research offers some information about sources of entrepreneurial stress; which may differ from the stress experienced by employees. Further, we argue that methods and instruments used for the measurement of entrepreneurial stress should be improved and specified. Therefore, we conclude that findings differ according to the methods and instruments used in the measurement of stress; and that different instruments should be used for those who are self-employed, as compared to those in direct employment. Next we would like to examine some of the practical implications of this research.

Practical implications

The results of the research are useful at least in two directions of organizational psychology: diagnostics and prevention of stress. The projective method (the Stress Card) was found to be easy-to-use and relevant to the respondents. Therefore, we recommend this method as convenient to use both for qualitative and quantitative (statistic) analyses by organizational psychologists working with entrepreneurs, managers and employees.

In addition, we see a new opportunity in the field of stress prevention enabling respondents to develop stress management competences in relation to issues connected to their main sources of stress. For example, those entrepreneurs who report time-management as a source of stress can learn to effectively utilise their time resources thus decreasing their stress levels. However, it is important for entrepreneur to apply flexible time-management as rigid planning may not be sufficient for effective management of the time stressor. The main competences needed for increasing entrepreneurial stress-resistance are: readiness to react in unexpected situations, ability to make decisions in conditions of time and information deficit, and the ability of apply optimal locus of control.

Many entrepreneurs find their employees are a source of stress (*Subordinates*). Faced with difficulties communicating with employees entrepreneurs often choose a defensive position; where they isolate themselves from the employees and conflictual communication evolves between parties. Training programmes that decrease isolation from employees; develop communicational skills and enable the building of relationships between entrepreneur and employees will contribute to decreasing both entrepreneurial and employees' stress.

Our study suggests that experienced entrepreneurs may be more able to manage their emotions more successfully when faced with complex problems. Therefore, training programmes for experienced and younger entrepreneurs should be differentiated to account for these differences and mixed groups can use the potential of more experienced entrepreneurs to transfer their emotional, work and life experience and their vision of stress in business to the less experienced entrepreneurs.

Training and development programmes that facilitate constructive work with crises and personal leadership training (*Failures*) will enable stress reduction. Time invested in personal growth and positive thinking can lead to changing attitudes towards entrepreneurs' own failures. Entrepreneurs can learn to see opportunities in a difficulty and interpret a crisis situation in a more positive way. Further, it is possible to continue to increase stress resistance as the act of overcoming a crisis allows entrepreneurs to move to the next level of their development.

However, designing programmes for entrepreneurial stress prevention are complex; as there are many demands from different sources such as: organizations, individual entrepreneurs, business development institutes, government structures, and those responsible for business development. We recommend that research into the sources of entrepreneurial stress is made in each individual case as part of the educational and developmental process. Thus, entrepreneurs learn to investigate themselves to understand more deeply their own sources of stress (as entrepreneurs in this study used the JSS and Stress Card). Appropriate training programmes can then be developed in response to the stressor(s) identified thus enabling entrepreneurs to increase their manageability of these stress factors. Respondents analysed their sources of stress and compared their perceptions of Manageability of Stress factors before and after the training programme. In addition, each entrepreneur received personal feedback from a trainer along with individual stress-management recommendations. At the end of research and training programme, respondents noted that these methods were effective in enabling them to manage their own stress factors.

Future research

In this research we used the “Stress Card” and although this was useful for individual diagnostics it was not possible to compare actual individual findings with any normative values. Future development of this work to standardise the method and collect data from a large number of entrepreneurs would enable the development of such comparison data. In addition, we revealed the main factors associated with entrepreneurial stress (*Responsibility, Challenge, Finance, Communication, Clients and Time*) and developed appropriate stress management training programmes. The next logical step would be to test the effectiveness of these stress management training programmes and particularly look at the potential impact on health related outcomes such as alcohol consumption.

In this study the entrepreneurs who perceive themselves as successful are more likely to report that they are better able to adjust their attitudes and behaviours in stressful situations. Further longitudinal study is required to explore behavioural regulation and how this may influence perceptions of entrepreneurial success.

Further, we need to appreciate that the world of business is for ever changing; and therefore our research must continue to develop to enable a sustainable society. Today, many businesses use flexible structures and management styles to cope with the fast changing environment associated with competitiveness in the post-information age (Hitt, Haynes, Serpa, 2010). Thus, factors such as creative thinking, individuality of people and organizations, a strong sense of reality, emotional intelligence, cooperative management and communication practices will differentiate successful entrepreneurs and businesses. Therefore, it is important to strive for effective mechanisms and instruments of stress management to enable business owners to be resilient, develop their potential and support a new kind of worker who is competitive, healthy and happy to contribute to the future society.

Conclusion

In conclusion, we note that research into entrepreneurial stress is important in the changing business environment and the labour market situation. New business developments such as net organizations, organic management, self-employment, project employment and other forms of work do not resemble past notions of direct employment anymore; but become closer to entrepreneurship by its psychological nature. Therefore methods and instruments of stress measurement of employees and self-employed workers need to be different, specified and supported by a wide range of normative data.

We need to identify the primary sources of entrepreneurial stress to further develop theories of entrepreneurial stress and enable the development of effective stress management training programmes for entrepreneurs and business leaders.

References

- Ahmad, S. Z., & Xavier, S. R. (2010). Stress and coping styles of entrepreneurs: a Malaysian survey. *International Journal of Entrepreneurship*, 14, 25-36.
- Bogdanova M.V., & Dotsenko E.L. (2010). *Personal self-regulation: From defences to creation*. Tyumen: Mandr & Co Ltd., p.138-172.
- Buttner, E.H. (1992). Entrepreneurial Stress: Is it Hazardous to Your Health? *Journal of Managerial Issues*, 4(2), 223-240.
- Chirikova A.E. (1999). Personal premises of success of Russian entrepreneurs' activity. *Psychological Journal*, 20(3), 81-92.

- Civic Chamber of the Russian Federation (2009). *Alcohol abuse in the Russian Federation: Socio-economic consequences and Countermeasures*. European Foundation for the Improvement of Living and Working Conditions, Fourth European Working Conditions Survey, Office for Official Publications of the European Communities. Luxembourg. 2006.
- Friedman, M., & Rosenman, R. (1959). *Association of specific overt behavior pattern with blood and cardiovascular findings*. *Journal of the American Medical Association*, 169(12), 1286–1296.
- Friedman, M., & Rosenman, R. (1974). *Type A Behavior and Your Heart*. New York: Alfred A. Knopf.
- Gladstein, D. L., & Reilly, N. P. (1985). Group decision making under threat: The tycoon game. *Academy of Management Journal*, 28, 813-827.
- Grant, S., & Ferris, K. (2012). *Identifying sources of occupational stress in entrepreneurs for measurement*. *International Journal of Entrepreneurial Venturing*, 4(4), 351-373. doi:10.1504/IJEV.2012.049828
- Hitt, H.A., Haynes, K.T., & Serpa, R. (2010). Strategic Leadership for the 21st century. *Business Horizons*, 53(5), 437-444.
- Holmes T.H., Rahe R.H. (1967) *The Social Readjustment Rating Scale*. *Journal of Psychosomatic Research*. 11, 213-218.
- Kobozev, I.U. (2011a). Estimation of work stress and its influence on coping behavior of managers. *Psychiatry Bulletin*, 42(37), 92-100.
- Kobozev I.U. (2011b). Estimation of work stress and its influence on mechanisms of psychological defenses of managers. *Scientific notes of P.F. Lesgaft University*, 74(4), 84-90.
- Lemyre, L.; Tessier, R. Fillion, L. (1988). *Mesure de Stress Psychologique (MSP): Se sentir stressé-e. / Measurement of psychological stress: To feel stressed*. *Canadian Journal of Behavioral Science/Revue Canadienne des sciences du comportement*, 20(3), 302-321.
- Leonova A. B., Kuznetsova A. S., & Barabanshchikova V.V. (2010). Self-regulation training and prevention of negative human functional states at work: traditions and recent issues in Russian applied research. *Psychology in Russia: State of the Art*, 3,482-507.
- Leonova, A., & Kachina, A. (2007). Stress-management: Technology of controlling stress in professional activity. *Personnel Management*, 9, 81-85.
- McClelland, D.C. (1987). *Human motivation*. New-York: Cambridge University Press.
- Maslikova G.V. (2001). *Personal determinates of entrepreneurial career success*. Stavropol: Stavropol State University.
- Plath, H. E., & Richter, P., (1984). *Ermuedung-Monotonie-Saetting-Stress. Handanweisung. Berlin*.
- Negative emotions of an entrepreneurial career: Self-employment and regulatory coping behaviors*. *Journal of Business Venturing*, 26(2) 226–238.
- Philinkova E.B. (2007). *Psychology of Russian entrepreneurship. Tutorial*. Moscow: Rector.
- Pozdnyakov V.P. (2001). *Psychological relationships and business activeness of Russian entrepreneurs*. Moscow: Institute of Psychology, Russian Academy of Sciences.
- Pozdnyakov, V.P., Pozdnyakova, N.N., & Tihomirova, S.V. (2012). Social psychology of Russian entrepreneurship. Development of informational analytical database. *Knowledge, Consciousness, Skills* 4, 227-233.

- Rauch, A. (2007). Entrepreneurial stress and long-term survival: is there a causal link? *Frontiers of Entrepreneurship Research*, 27(4) 1-10. Retrieved from <http://digitalknowledge.babson.edu/fer/vol27/iss4/2>
- Report of Civic Chamber of the Russian Federation: Alcohol abuse in the Russian Federation: the socio-economic consequences and Countermeasures. (2009). Retrieved from <http://www.hse.ru/data/2013/08/14/1291400719/alkogol.pdf>
- Robert A. B., Franklin, R.J., & Hmielesk, K.M. (2013). Why Entrepreneurs Often Experience: Low, Not High, Levels of Stress : The Joint Effects of Selection and Psychological Capital. *Journal of Management*. July 15. Retrieved from: <http://jom.sagepub.com/content/early/2013/07/12/0149206313495411.full.pdf+html>
- Saltzman A. (1991). *Downshifting: Reinventing Success on a Slower Track*. New York: Harper Collins.
- Samoukina, N. (2011) "Anti-stress program "5 steps". Retrieved from <http://www.samoukina.ru/index/publikaczii/stati/antistressovaya-programma-pyat-shagov.html>
- Smith, A. (1976). *An Inquiry into the Nature and Causes of the Wealth of Nations*. London: Methuen & Co., Ltd.
- Tepperwein K. (1997). *Kak protivostoyat prevratnostyam sudby*. Sankt-Petersburg: Piter-Press. Plath, H. E., & Richter, P. (1994). *Ermüdung, Monotonie, Sättigung und Stress (BMS II). Verfahren zur skalierten Erfassung erlebter Beanspruchungsfolgen*. Berlin: Psychodiagnostisches Zentrum.
- Vlah N.I. (2011). *Entrepreneurial stresses and risks of mental health: synthesis of medical and psychological aspects*. *Siberian Bulletin of Psychiatry and Addictology*, 2, 60-65.
- Vodopianova N.E. (2009). *Psychodiagnostics of stress*. Sankt-Petersburg: Piter.
- Леонова А. Основные подходы к изучению профессионального стресса // *Вестник Московского университета. Серия 14. Психология*. — 2000. — № 3. — С. 4–21. Тьюбсинг Д. А. Избегайте стрессовых ситуаций. – М.: Медицина, 1993–144 с.