Abstract

The objective of this research is to culturally adapt the Perceived Stress Scale questionnaire in Romanian organizational climate, to analyze the psychometrics proprieties of the three versions of the questionnaire and to determine the best version for the Romanian culture. At this study participated 219 persons with the age between 21 and 56 years old (M= 30.49, SD= 7.65), 153 persons of female gender and 86 persons of male gender. Results: psychometrics proprieties of the three variants of PSS are at an acceptable level, all of the three variants could be used in Romanian culture, also they can be used in organizational context and general context. Stress correlates statistically significant with job satisfaction (r= -.22, p<.01), work frustration (r= -.40, p<.01), turnover (r=.27, p<.01), wellbeing (r= -.56, p<.01), confirming all the hypothesis studied.

Keywords: stress, adaption, Romanian culture, organizational, context, turnover

1. INTRODUCTION/THEORETHICAL FRAMEWORK

In order to completely define the concept of stress, we must know the meaning of the word stress, so by starting from the English Dictionary, the word

*Corresponding author: Mihăilă Teodor
Email: teo.mihaila@gmail.com
“stress” derives from the old English “stresse”, from medieval French “estresse” and from vulgar Latin “strictia” which by then had the meaning of suffering, life problems (Bamber, 2006).

According to Cox (1993), the definition of stress is not a semantic game but a very important word for the scientists, because if stress is misinterpreted it can confuse the scientist to measure something else. So to speak, a lack of understanding from the scientists’ part can develop wrong intervention programs at management levels.

Stress as a general term is referring to two different concepts, named stressors (characteristics of the environment or thoughts that determine side effects on the individual) or tension (individuals’ side effects towards stressors) (Cohen, Kamarck & Mermelstein, 1983; Beehr & O’ Hara, 1987; Knapp, 1988 cited in Bamber, 2006; Dewe, O’ Driscoll & Cooper, 2010).

The most popular theory and definition of stress today is the transactional theory of Lazarus and Folkman (1984) describing the interaction between human and environment and their combination.

Lazarus and Folkman (1984), after the cognitivist revolution that took place in this area, where focused on researching stress both at work and in general. So they developed a new definition of stress that changed the perception of which stress appears and how it can be intervened against it. Stress, from Lazarus and Folkmans’ point of view is a cognitive mediation between the product of what the individual offers and the interaction with the environment. This approach was called “the transactional theory of stress” (Lazarus and Folkman, 1984).

Lewin cited in Mark and Smith (2008) define stress as individual characteristics that interact with the environment requirements that determines tensions and consequences on the body and physical and mental health.

According to Leka, Griffiths and Cox (2003), occupational stress is the result of a mismatch between individual, knowledge and his abilities and requirements and pressures at work. This definition doesn’t contain only the requirements from work which in most of the cases can’t be achieved, but also the skills level, the knowledge and abilities of the employee which cannot suffice for the position they occupy.

Hans Selye is the pioneer of the general adaptation syndrome theory since ’26 when he was a medicine student. Then he observed patients with multiple diseases which had many common signs and symptoms.
He also observed the fact that men lost their muscle tone, weight, developed various types of cancer, lost their ambition, motivation and the facial expression betrayed patients’ disease. So Hans Selye asked himself “what syndrome is this?” (Selye, 1956).

This theory was developed by Hans which truly marked the beginning of an approach based on the answer towards stress and the way how people react to it. In 1936 Selye introduced the concept of the diseases that had connections with stress regarding a “general syndrome of adaptation” (GSA). He suggested that “stress is the unspecific answer of the organism towards every request made to it” (Selye, 1956) and that all patients regardless of disease, had the same symptoms (Selye, 1956).

This theory as an answer from the body towards the stressors was transposed in a universal model. Three stages are described in the GSA state. The alarm reaction is a quick psycho-physiological answer and in this initial moment of shock our resistance to stress is reduced (1). After the initial shock phase, in the counter-shock phase it is observed that the resistance regarding stressing events is rising (2). In this moment “the mechanisms of defense are activated thus forming the reaction known as “fight or flight response” (3) (Selye, 1956).

This “fight o flight response “ is preparing the body to take measures. The increase of activity from the sympathetic nervous system and release of catecholamine prepares the body for an intense action. This intense activity brings with itself internal physiological changes initiated by the hormones which offer us large quantity of energy with the help of fat and glucose within the body (Selye, 1956).

1.1. TRANSACTIONAL THEORY (LAZARUS AND FOLKMAN, 1984)

In 1966, Lazarus suggested the fact that stress can be treated through the organizational point of view, being a concept with a broad understanding and essential for the adaptation of the employee at work. Stress is not a concept with a limited number of determining factors but it is considered a concept which is influenced and influences a large set of other concepts (Lazarus and Folkman, 1984).

Some scientists were thinking to pass the concept of stress on all the activities that required adaptation. Today society is so complex that requires the person to
adapt daily though an intense cognitive effort, specific styles and actions in life that
don’t necessarily lead to stress (Lazarus and Folkman, 1984).

If we wish to see stress as a generic concept, we must differentiate and
integrate it in a way that we can give it meaning. Next stress will be defined from
three perspectives: stimulation definitions, answer definitions and rational
definitions (Lazarus and Folkman, 1984).

Definition of stress through stimulation refers to the classic biological
approach in which the individual responds in a physiological way to a stimulus
from the environment like any animal. The stressing stimulus is a negative event
from the individual’s life, and stimulus definitions represent actions, events or
conditions which appear, negatively affecting the physiological state of (Lazarus
and Folkman, 1984).

with negative impact in three great categories: major changes, after cataclysmic
events which affect a greater number of people, major changes that affect one or
more persons and daily negative events.

Events that are considered cataclysmic affect a number of people but which
are related (relatives, friends) being an event that can’t be controlled by the
individual. An eloquent example considered as cataclysmic would be the death of a
loved one or relative, the life threat by its disability to cure the disease (cancer), a
cataclysmic event is represented by divorce or an important exam from the
individual’s life (Lazarus and Folkman, 1984).

1.2. COGNITIVE BEHAVIORAL STRESS THEORY

Cognitive behavioral stress theory is promoted by Bamber (2006) stating that
this theory looks a lot like the transactional theory of Lazarus and Folkman (1984)
but has certain features.

It is said that mostly every employee brings with itself a unique set of
personal attributes, needs, temperament, faiths and assumptions (cognitive
schemes), behavioral adaptation strategies, physical constitution, level of energy,
intelligence, knowledge, forming skills at work. In turn, the workplace is built on
certain contents and characteristics that propose a set of requirements from the
employee. This model points out that if the personal attributes of the individual are
enough to satisfy the requests from work and work environment, the individual
experiences work satisfaction, adaptation, physical and mental health and a low level of stress (Bamber 2006).

Nevertheless in the case which the person doesn’t have the required personal attributes or adaptation resources corresponding to the work requirements, the workplace doesn’t satisfy personal needs, and the level of stress experienced is higher. It’s said that “a human can be poison for the other” (Bamber 2006), summarizing this model very well, because two employees that do the exact same work, maybe depending on the coping level, can evaluate and experience workplace situations in a totally different way (Bamber 2006).

L says that an individual can’t be affected only if he’s seen as stressed. He came to the conclusion that the life event is stressing depending on every individual’s perception. For all that, studies shown that certain events are much stressing than others, grouping them into categories (Ogden 2007):

- **Important events.** Very often people function in several different areas, such as the work place, family and friends. For a single person, workplace events would be more stressing while for someone else, their family life would be more important or stressing. Swindle and Moos (1992) cited in Ogden (2007) said that the stress factors from important activities of the person’s life are much stressing than those less important (Ogden 2007).

- **Overloading:** the multitude of objectives tend to be more stressing than concentrating on a single objective. Therefore a single stress factor that adds up to other stress factors will be evaluated as more stressing than when it’s manifested in a controlled environment – known as “the last straw” (Ogden 2007).

- **Ambiguous events.** In the case where an event is defined clearly, the person then could efficiently develop a coping strategy. Nevertheless, in the case where the event is ambiguous and unclear, then the person firstly has to spend time and energy considering which adaptation strategy is best. This fact is reflected in studies that illustrate how a poor work control and a greater workplace role ambiguity can lead in most of the cases to a higher level of stress (Ogden 2007).

- **Uncontrollable events.** If a stressing event can be predicted and controlled, it is known to be less stressing than an uncontrolled and random event. For example, experimental studies show that powerful explosions in which the
noise is unpredictable, are seen as more stressing than the predictable explosions (Glass and Singer 1972 cited in Ogden, 2007).

- Self-efficiency. In 1984, Lazarus and Folkman suggested that self-efficiency is a strong factor for mediating stress. Self-efficiency refers to the individual’s sentiment of trust and the capability to fulfill its desired activity.

- Resistance. Resistance is based on individual’s capacity to control its life events. Resistance was described as reflecting: a) personal feelings of self-control; b) a desire to accept challenges; c) commitment. The individual’s degree of resistance influences the capacity to evaluate stressful events and the answer to them (Ogden, 2007).

- Knowledge. These can help the individual to perceive events from work or everyday life, because he knows what that activity or event means, and for him a new activity or a new objective is just one more activity to fulfill that’s not stressful (Ogden, 2007).

From the occupational stress’ point of view, Kompier (2003) cited in Kompier and Taris (2005) distinguishes seven theoretical approaches regarding stress, general wellbeing, work satisfaction and job design:


Coping methods from studies have experienced wide recognition, each theory and specialist developing its own coping methods due to differences between individuals.
Stranks (2005) developed a group of workplace adaptation methods so that the stressors can be limited:

1. Gather as much information about stress:
   a. Understand the processes and effects of stress
   b. Identify events of major sources of stress
   c. Anticipate stressful periods and plan
   d. Develop actions that you can understand in order to adapt better
   e. Identify personal development opportunities in stressful periods
   f. Find an optimal stressor

2. Identifying a systematic approach on stress
   a. Defining the specific problem: breaking it into smaller pieces for better management
   b. Gathering as much information as you can regarding that problem to know what to expect
   c. Discover why you have the problem
   d. Remembering management modes of previous experiences
   e. Developing and evaluating a group of alternatives regarding your actions
   f. Selecting an action that fits with that problem

3. Reconcile with your feelings
   a. Distinguish between what you feel and what you think
   b. Don’t suppress your feelings, talk with close persons.
   c. Learn to be flexible and adaptable
   d. Accept your feelings

4. Developing behavioral aptitudes
   a. Don’t use the words “I can’t” when you don’t wish to fulfill something
   b. When you identify the needs in your life, take action
   c. Use the spare time in your favour
   d. Be assertive
   e. Keep conflicts under control
   f. Avoid blaming others in extreme situations
   g. Show positive feelings to those around you
h. Learn to say “NO”

i. Learn to manage problems when they appear, if you cancel them they might get even worse

j. Real evaluation of expectancies, avoid extreme thoughts

k. Learn to get out of difficult situations and focus on breaks.

5. Establish and maintain a solid network of emotional and social support
   a. Ask for help and be responsive when help is offered
   b. Develop empathy for others
   c. Make an honest evaluation of your needs and identify the ones you can achieve
   d. List people you are in conflict with and by any case find a way to improve the relationship
   e. Get rid of negative relationships
   f. Maintain a good quality of relationships
   g. Tell the people who you are in good relation with how important they are

6. Develop a way of life that improves the effects of stress
   a. Do sport frequently
   b. Frequently get involved in sports and relaxation methods
   c. Alcohol is not recommended
   d. Do not smoke
   e. Get enough time for you and for breaks
   f. Keep a balanced diet
   g. Avoid coffee
   h. Avoid food that contain a lot of fat, sugar chemicals
   i. Plan time effectively
   j. Learn to be responsible
   k. Keep a positive attitude
   l. Don’t give importance to small things

7. Concentrate on a positive and spiritual development
   a. Adopt a positive attitude towards different problems
   b. Practice meditation techniques
   c. Give a meaning to relaxation
   d. Seek a spiritual sense
   e. Learn to cope with stressful situations
f. Trust yourself

g. Increase the degree of problem awareness and manage resources.

8. Successfully plan and execute changes from your life
   a. Wish positive things from your life
   b. Do small manageable changes
   c. Practice these changes for a month and check if they’re effective

2. OBJECTIVES AND HYPOTHESES

2.1. OBJECTIVES

The objective of this research is to adapt the self-report questionnaire (Perceived Stress Scale- 4 items) in Romanian organizational context. Thus, will be tested the construct validity of the questionnaire in organizational context and its relationship with other organizational concepts as: attitudes, job satisfaction, work frustration, absenteeism, physical health and turnover.

2.2. HYPOTHESES

- I1. There is a statistically significant relationship between stress and job satisfaction.
- I2. There is a statistically significant relationship between stress and turnover.
- I3. There is a statistically significant relationship between stress and physical health.
- I4. There is a statistically significant relationship between stress and well-being.
- I5. There is a statistically significant relationship between stress and work frustration.
- I6. There is a statistically significant relationship between stress and absenteeism.
3. METHOD

3.1. PARTICIPANTS

In this study participated 219 persons with age between 21 and 56 (M= 30,49, SD= 7,65), 153 persons of feminine gender and 86 persons of masculine gender. Participants have been selected from professional social site Linkedin.

3.2. INSTRUMENTS

Perceived Stress Scale (4 items)- conducted by Cohen, Kamarck, and Mermelstein (1983). Is a self-report questionnaire and has a Likert responde scale between 0 (never) and 4 (often), an example for item: “In the last month, how often have you felt that you were unable to control the important things in your life?”

Job Satisfaction: has been evaluated by 3 items from Michigan Organizational Assessment (MOAQ, Cammann, Fichman, Jenkins, & Klesh, 1979). Example for item: „All in and all I am satisfied with my job”

Turnover: has been evaluated by 3 items made by Jaros (1997). Example of item: „In the next year I intend to leave the organization where I work now”. Each item has 5 variants to response, 1 (strongly disagree) and 5 (strongly agree).

Absenteeism has been evaluated by 1 item (Johns and Xie, 1998): „Over a year, how many days missing to work, due to absenteeism”?

Work frustration: has been evaluated by 3 items made by Peters and O’Connor (1980). Example for item: „Realization of my work is a frustrating experience”, and each item has 7 variants to response (1-strongly disagree, 7-strongly agree).

Well being has been evaluated by 5 items from SWLS scale (Diener, Emmons, Larsen and Griffin, 1985). Exemple of item: „I am satisfied with my life”. Each item has 7 variants to response (1-strongly disagree, 7-strongly agree). Physical Health has been evaluated by 1 item: “How would you assess the current state of physical health?”, and the variants to response are: 1-badly, 2-medium, 3-good, 4-very good.
3.3. PROCEDURE

Self-report questionnaires was applied in online on LikedIn site. Participants were informed about the objectives of the study and they can may withdraw in any time from compleation. Completation time was between 15 and 20 minutes.

3.4. DESIGN

This study is a non-experimental design, transverse, and self-report questionnaires were applied in the simultaneously. The variables are: self-perceived stress, job satisfaction, physical health, absenteeism, work frustration, well-being and turnover.

4. RESULTS

The results were analyzed with SPSS 15 IBM.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Minimum</th>
<th>Maximum</th>
<th>M</th>
<th>SD</th>
<th>Skewness</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>21</td>
<td>56</td>
<td>30.49</td>
<td>7.65</td>
<td>1.37</td>
<td>1.75</td>
</tr>
<tr>
<td>health</td>
<td>1</td>
<td>5</td>
<td>3.81</td>
<td>.78</td>
<td>-.59</td>
<td>.39</td>
</tr>
<tr>
<td>PSS-4</td>
<td>0</td>
<td>12</td>
<td>5.32</td>
<td>2.97</td>
<td>.14</td>
<td>-.54</td>
</tr>
<tr>
<td>JS</td>
<td>3</td>
<td>21</td>
<td>15.69</td>
<td>3.83</td>
<td>-.80</td>
<td>.62</td>
</tr>
<tr>
<td>WF</td>
<td>3</td>
<td>19</td>
<td>8.65</td>
<td>3.69</td>
<td>.51</td>
<td>-.03</td>
</tr>
<tr>
<td>Turnover</td>
<td>3</td>
<td>15</td>
<td>7.31</td>
<td>3.78</td>
<td>.52</td>
<td>-.82</td>
</tr>
<tr>
<td>Well-Being</td>
<td>4</td>
<td>28</td>
<td>18.20</td>
<td>5.57</td>
<td>-.48</td>
<td>-.19</td>
</tr>
<tr>
<td>Absenteeism</td>
<td>1</td>
<td>5</td>
<td>1.22</td>
<td>.64</td>
<td>3.58</td>
<td>14.42</td>
</tr>
</tbody>
</table>

Note: JS= job satisfaction, PSS-4= Perceived stress scale 4, WF= work frustration

In Table 1, can be observed descriptives statistics for Perceived Stress Scale (4 items), physical health, age, job satisfaction, work frustration, turnover, well-being, absenteeism.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Men</th>
<th>Women’s</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td>PSS-4</td>
<td>4.48</td>
<td>2.47</td>
<td>5.69</td>
</tr>
</tbody>
</table>

In this table, can be observed, the mean differences between men and women’s with reference to stress perception and can be observed that women have achieved lower scores as men (M₁= 4.48, M₂= 5.69, t= 2.80, p<.05).
Table 3. Reliability

<table>
<thead>
<tr>
<th>Variabila</th>
<th>α</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived Stress Scale 4</td>
<td>.75</td>
</tr>
</tbody>
</table>

In table 3 can be observed the reliability of the Perceived Stress Scale (4 items form), and Alpha Cronbach for this test is $\alpha=.75$.

In this histogram can be seen normal distribution of the data for Perceived Stress Scale (4 items form).

Table 4. Inter-correlation between items

<table>
<thead>
<tr>
<th>Variable</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>i1</td>
<td>-</td>
<td>.37**</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>i2</td>
<td>.33**</td>
<td>-</td>
<td>.54**</td>
<td>-</td>
</tr>
<tr>
<td>i3</td>
<td>.57**</td>
<td>.35**</td>
<td>.44**</td>
<td>-</td>
</tr>
</tbody>
</table>

In table 4 can be observed inter-correlation between items for Perceived Stress Scale 4 version, and it can be seen a strongly correlations between items.
Table 5. Factorial analysis

<table>
<thead>
<tr>
<th>Items</th>
<th>Factor 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>I1p4</td>
<td>.74</td>
</tr>
<tr>
<td>I2p4</td>
<td>.74</td>
</tr>
<tr>
<td>I3p4</td>
<td>.76</td>
</tr>
<tr>
<td>I4p4</td>
<td>.78</td>
</tr>
</tbody>
</table>

Variance 54.62%

In table 5 can be seen, the factorial analysis for Perceived Stress scale, and how the items loaded the principal factor. Factor analysis shows that the principal factor loaded 54.62% of the total variation of the concept. Items loads very well (.74,.74,.76,.78).

Table 6. Person Correlation for study variables

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)PH</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(2)PSS</td>
<td>-.37**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(3)JS</td>
<td>.17**</td>
<td>-.58**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(4)WF</td>
<td>-.08</td>
<td>.44**</td>
<td>.34**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(5)Turnover</td>
<td>-.12</td>
<td>.26**</td>
<td>.10</td>
<td>.10</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(6)WellBeing</td>
<td>.37**</td>
<td>-.59**</td>
<td>.69**</td>
<td>.32**</td>
<td>.20**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(7) Age</td>
<td>.00</td>
<td>.31**</td>
<td>.44**</td>
<td>.48**</td>
<td>.15**</td>
<td>.45**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(8) AB</td>
<td>-.14**</td>
<td>.03</td>
<td>-.28**</td>
<td>.02</td>
<td>-.06</td>
<td>.03</td>
<td>-.14**</td>
<td></td>
</tr>
</tbody>
</table>

Note: PH= physical health, PSS= Perceived Stress Scale, JS= job satisfaction, WF= work frustration, AB= Absenteeism

In table 6 can be observed, the validation of PSS to work criteria. The results of this table shows that this instrument can be used in evaluate occupational stress.

The hypotheses of the study were confirmed, the variables correlated with perceived stress: physical health (r= -.37), job satisfaction (r= -.58), work frustration (r=.44), turnover (r=.26), well being (r= -.59) and the absenteeism not correlate with stress. Thus, can say that PSS-4 is a very good instrument for occupational stress evaluation.

5. CONCLUSION

This research is primarily aimed to test the psychometric qualities of 4 item version of Perceived Stress Scale, on a group of people that work in organizations from Romania. Of course, in Romania, there is no dedicated tool to measure stress in a general way, but even in the organization, it can be a direction for future research. PSS is one of the most effective and adaptive quizzes from recent studies.
Turkey (Orucu and Demir, 2009), China (Ng, 2013; Su, et. al., 2008), Grecia (Andreou, et. al. 2011), Japonia (Mimura and Griffiths, 2004; 2008), Franța (Lasage et. al, 2012), zona arabică (Chaaya, 2010), Mexic (Ramirez and Hernandez, 2007).

The research results has shown a good psychometric quality, a good internal consistency but also a specific behavior of factors in factorial exploratory analysis, the factorial structure remaining the same as the original one at all three versions of the instrument PSS. Also the concurrent validity is very good, we can observe strong correlations between all the instrument’s versions and behavior and attitudes at work.

REZUMAT

Obiectivul acestei cercetări este de a adapta cultural chestionarul auto-evaluativ Perceived Stress Scale în mediul organizational românesc, de a analiza calitățile psihometrice ale celor trei versiuni and determinarea celei mai bune versiuni pentru cultura românească. La acest studiu au participat 219 persoane cu vârsta între 21 de ani and 56 (M= 30,49, SD= 7,65), 153 de persoane de gen feminin and 86 de persoane de gen masculin.

Rezultate: calitățile psihometrice ale celor trei variante ale testului PSS sunt la un nivel acceptabil, toate trei variante pot fi utilizate în cultura românească, atât în context organizațional cât and în context general. Stresul corelează semnificativ statistic cu satisfacția la locul de muncă (r= -.22, p<.01), frustrarea la locul de muncă (r= -.40, p<.01), dorința de a pleca din organizație (r=.27, p<.01) and starea generală de bine (r= -.56, p<.01), confirmându-se toate ipotezele studiate.

REFERENCES


