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DEPARTMENT OF PSYCHOLOGY AND EDUCATIONAL SCIENCES

THESIS

PERSONAL AND ORGANIZATIONAL RISK FACTORS IMPACT ON INTERVENTION EFFECTIVENESS OVER HEALTH FOR PEOPLE WITH CARDIOVASCULAR DESEASE

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CLUJ-NAPOCA

2014

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INTRODUCTION

According to statistics made in 2012 by Romanian Heart Foundation, our country ranks third in the world in terms of the proportion of deaths from cardiovascular disease, 1 of 3 Romanian dying because of it. Hypertension is the most common cardiovascular risk factor; because it cannot be associated with acute pain it often passes unnoticed as "undervalued".

According to published data from the largest study assessing the prevalence of hypertension in Romania SEPHAR II (Darabont Ghiorghe, Babes, Pop, Thomas, Vasilecu, Dobreanu, Taut 2012), 40.4% of the general population is hypertensive but the known percentage is only 28.1%, which shows that over 12% of the population suffer from this scourge without being aware of this. HTA is the basis of 50% of cardiovascular disease and is one of the most important causes of morbidity and mortality. If for other diseases treatment is invoked relatively shortly, it is not the same situation and hypertension. This once installed requires medication and continuous attention throughout life. Hypertension is most often of unknown etiology that is associated with uncontrollable risk factors, such as heredity, and modifiable risk factors such as high salt intake, physical and psychological stress, smoking, overeating, especially if it is associated with excess weight, lack of regular exercise, sedentary lifestyle and heavy drinking. The major objective of this study is to see at what extent the specific health education programs can reduce the negative impact of these factors on the health of the person and highlight the impact of other risk factors related to socio-economic peculiarities and organizational environment.

Based on this premise this paper aims to identify individual and organizational risk factors and their impact on the recovery of a hypertensive person.

The first chapter focuses on quality of life, as a way of objectifying the welfare of hypertensive patients, while going review of its evaluation, based on a quality meta-analysis of studies in the literature.

The first part of the second chapter presents theories adherence, creating an overview of the main theories concerning adherence to treatment. Presented theories are: theory of beliefs about health, the theory of reasoned action, theory of planned behavior, protection motivation theory , HAPA model - model that underlies studies 3 and part of study 4. The second part of chapter two is reviewing the risk factors that influence treatment adherence in cardiovascular disease are subdivided into factors emphasizing personal risk, focusing on the provided social support, self-efficacy, the complexity of diagnosis, socio-economic and doctor-patient relationship but also organizational risk factors with particular emphasis on the roll stress at work and the two work stress models involved in cardiovascular pathology model effort work effort-reward model of Karasek and Siegrist. This last model was developed specifically for the study of organizational stress impact on cardiovascular pathology and was already validated by numerous studies in hypertensive patients with cardiovascular pathology.

Health education in people with cardiovascular diseases and hypertension is mainly studied in the frame of the third chapter, reviewing the main types of intervention for improving adherence to treatment and here we refer not only

to drug treatments but especially interventions aiming lifestyle changes considered to be a major factor affecting the development of hypertension. The focus is on education for appropriate eating behavior pathology of hypertension by reducing intake of salt and saturated fats in favor of unsaturated adoption of health protective style cooking and a balanced diet to reduce the risk of overweight and obesity by increasing intake fruits and vegetables in the diet of the person. It also analyzes the importance of carrying out education programs for active lifestyles to include a moderate-intensity physical activity of at least 30 minutes in each day.

Education for a healthy diet and an active lifestyle were the targets for health education program developed and implemented in study three. Another factor analyzed and considered the impact for hypertensive patient is smoking, this leading to complications in 46% of cases of hypertension. Tobacco addiction models are analyzed here with a focus on risk and protective model factors by Stead and Lancaster (2004) theory and Albert Ellis rational -emotional behavior as representative of cognitive behavioral theories that underlie the intervention group was designed and implemented in study 4. The last part of the chapter we find a classification and review of results in literature on the effectiveness of psychological interventions for smoking cessation in people with cardiovascular disease.

Chapter four includes a mapping of the Romanian to the Siegrist effort-reward imbalance scale (2002) developed specifically to identify imbalance between employee effort and rewards where by rewards we include material rewards, recognition and also rewards related to job security. The instrument was developed specifically for people with cardiovascular pathology as a way of objectifying work stress.

Chapter five is an organizational study focused on demonstrating the confirmation of hypertension modifiable risk factors association with the declared health of participant (with a cardiovascular pathology or chronically healthy-without any disease), as well as personal risk factors and organizational moderators of adherence programs health education. Personal factors included in the study were: social support, self-efficacy as well as the health education program type where patients get involved. As an organizational factor, the impact of the effort-reward imbalance has been analyzed as a consequence of work stress

Chapter six focuses on the impact of health education programs on hypertensive patients and their quality of life. The hypotheses of this study is based on the HAPA model and verified the impact of three types of health education programs first focused on changing eating habits, second focused on increasing adherence to physical activity and the third is a combination of the first two on the quality of life of hypertensive patients.

Chapter seven concerns the impact of organizational risk moderating factors of adherence to programs of health education organization involved in the effectiveness of interventions to tobacco addiction in hypertensive persons. The novelty consists in analyzing the impact of organizational group "peer"-reward imbalance and work as moderators of organizational environment factors on the effectiveness of anti-smoking intervention.

The last chapter contains conclusions and final discussions.

CHAPTER I
QUALITY OF LIFE – WAYS OF OBJECTIFICATION ADHERENCE TO TREATMENT

Quality of life is a complex concept with a wide use both in medical education and in the health psychology, aiming the subjective perception on individual health. A reduced quality of life is associated with a high mortality (Reis, Kaplan, Limbreg and Prewitt, 1995) and a high utilization of medical services (Conelli, Philbrick, Smith, Kaiser and Wymer, 1989; Siu, Reuben, Ouslander and Osterweil, 1993).
Carr and Higginson (2001) considered as the main determinant of quality of life measure in which hopes and ambitions are realized in everyday life, the correlation between the position of the person is perceiving as occupying in the society and its own standards and aspirations and health evaluation by reference to an ideal personal model.

Quality of life measures the impact of medication and various diseases on all aspects of a person's life, being measured by special instruments designed to assess the ability of people operating in daily life tasks. The analysis of the Quality of life components is useful for: investigating the effects of physical, emotional and social aspects of treatment and the impact of the disease on the daily life of the individual; analysis of treatment effects and disease from the patient's perspective; and determining the need for social, emotional and physical support physically during the disease.
So the quality of life evaluation is beneficial to decide on a specific treatment option; to analyze the effects of treatment or the disease from the patient's point of view and to determine the psychological, physical and social needs of the patient through the duration of the disease. These analyzes inform patients about the effects of some treatment by monitoring its effects from the perspective of the patient, and offers the choice of a new package of treatment, if any (Lupu, 2006) and on the other hand they enable the medical team to design efficient health interventions.

David Thompson and Cheuk-Man Yu (2003) show that in patients with cardiovascular pathology there are several events that will influence the quality of life such as symptoms of heart failure and / or angina, decrease of physical potential and reduced exercise capacity and psychological changes associated with chronic stress. Modern treatments focus not only on improving life expectancy and reducing symptoms, but also increasing the quality of life of the patients, considered as an important indicator of therapeutic benefit in primary care. (Treasure, 1999; Thompson and Yu, 2003).
The quality of life is proving a difficult parameter to assess especially because there is no consensus on the definition of the term although all definitions refers to physical, emotional and social wellbeing, and each disease puts its own imprint disease differently - through signs and symptoms –on the wellbeing of the patient. This is why there are a variety of tools that assess quality of life depending on the pathology investigated. Quality of Life aims to act as a common reference against which the impact of different treatments can be measured for patients with the same health condition (same condition) or the impact of different treatments in

different health conditions (different diseases).
(Roebuck Thompson, 2001).

CHAPTER II

ADHERENCE TO TRATAMENT- THEORIES AND FACTORS THAT PRODUCE IMPACT

2.1. Treatment adherence- conceptual delimitations

For several decades, researchers and practitioners in related fields of medicine: psychological medicine, public health, primary care, have attempted to understand the factors contributing to the success of an individual in achieving and maintaining a desired health behavior. These researchers in the field of healthcare have created a number of theoretical models for understanding what people think about health and the sources of motivation that support behavior change in order to maintain health. While some models have received less empirical attention than others, each can be helpful in some contexts and can bring a useful organizational structure to help us maintain behavioral changes to support health and adherence to treatment plans. These models are constituted of ‘beliefs’ and 'attitudes'. Beliefs involving findings of fact about something and are cognitive elements in the landscape in which people evaluate and respond to ideas. Attitudes involve emotional factors and involve evaluative ideas based on personal feelings of an individual. For example, if a person believes a certain approach as unpleasant, will have a negative attitude about it, even if he admits that the respective approach is important for his health.

2.2. Theories of adherence to treatment

The chapter focuses on a synopsis of those most important theories in literature, focusing on the HAPA model. The following theories have been reviewed:

2.2.1. Theory of health beliefs (Health Believe Model, Rosenstock, 1966)
2.2.2. The theory of reasoned actions
2.2.3. The theory of Planned Behavior
2.2.4 The Protection Motivation Theory
2.2.5. The HAPA Model

The Health Action Process Approach HAPA, introduced by Schwarzer in 1996, is a cognitive model of behavior change that includes self-efficacy considered as a direct predictor of intentions and behavior of the person. This is consistent with Social Cognitive Theory of Bandura (1997). A personal sense of control facilitates health behavior change. The self-efficacy is influencing the activity and effort to change risk behavior and the persistence to continue the struggle despite all the obstacles and failures that undermine the motivation of the individual. Although self-efficacy directly related to health behaviors, influences them indirectly also through its impact on goals. Self-efficacy influences the changes people make and the difficulty and the goals they choose. (eg "I'm going to reduce smoking" or "I'm going to quit smoking").
People with high self-efficacy will select several challenging targets (De Vellis, 2000 http://cancercontrol.cancer.gov/brp/construts/self-efficacy/index.html), seeing the change as an opportunity rather than a obstacle. Schwarzer (2001) distinguishes between pre-intentional motivational processes

that lead to behavioral intention and post-intentional volition processes that lead to actual behavior.
Self-efficacy influences the planning process leading to taking the initiative, maintaining, and managing behavior change relapses, Schwartzer and Luszczynska (2005). Beside the action managed by cognitive factors, an important role is played by the situational factor represented by the social support that person receives.
The novelty of this model is the distinction it makes between intention and behavior, in most of the time the intention being insufficient to lead to the behavior. The practical implementation process is assuming both an action plan and a plan for implementation of the action, to put into practice.

2.3. Risk Factors influencing treatment adherence in cardiovascular disease

2.3.1 Personal Risk Factors

2.3.1.1. The complexity of the treatment is one of the important factors in the treatment adherence.

Recent research shows that less frequent administration of the medication (e.g., once a day) is associated with the patient's greater compliancy then in case of more frequent dosing (e.g., three or four times daily) (Girvin, McDermott and Johnston, 1999; Hamilton & Briceland, 1992, Paes, Baker, & Soe-Agni, 1997). The treatments which are associated with several side effects are also associated with poorer adherence compared to treatments with fewer side effects Ammassari (2001).
Moreover, complex treatment structures are often generally associated with poor adherence to treatment, when comparing to simple treatment structures (Meichenbaum, Turk, 1987).
Research examining adherence to many types of self-care programs, observed that the level of compliance is strongly correlated with various aspects of a multifaceted system (Moran, Christensen, and Lawton, 1997; Orne & Binik, 1989) . Patients show poor adherence to some aspects of the treatment program, while maintaining adequate adherence others which suggests that within a complex treatment there appear certain benefits that make the patient follow the treatment, and if they do not perceive these benefits patients may have difficulties in complying of multiple requirements.

2.3.1.2. Social-demographic variables

Patient age and socioeconomic status were most consistently associated with differences in adhesion. Studies have consistently shown that young adults have a better grip than teenagers and middle-aged patients are more adherent than younger adults and older people may be more adherent to treatment than any other age group. However, after age of sixty-five, there is some evidence that membership begins to decline (Weingarten & Cannon, 1988).

2.3.1.3. Locus of control and self-efficacy

Beliefs related to locus of control have long been considered for a long time to have a central role as a possible predictor of health behavior (Wallston & Walls tons, 1982), more than three decades (Strickland, 1978; Wallston, 1992). Individual differences in locus of control reflect the extent to which one believes that positive results are due to own actions or some external factors.

Despite extensive empirical research, association membership locus control behavior remains unclear (Wallston, 1992). Some evidence shows that patients with an internal locus of control have a higher degree of adhesion (Chen et al, 1999;. McDonald-Miszczak, Maki, and Golud, 2000 Oldenburg, MacDonald, and Perkins, 1988; Poll Kaplan & De -Nour, 1980) .Other research suggests that the existence of internal control is not directly or significantly related to adherence (Brown & Fitzpatrick, 1988; Grav & Oseasohn, 1991, Kaplan, Atkins, and Reinsch, 1984, McNaughton & Rodrigue, 2001, Schneider et al, 1991;. Wittenberg et al, 1983)

Individual differences in self-efficacy beliefs and expectations of patients are a psychological characteristic that has raised an exclamation mark as a potential determinant of behavior accession. Although many authors and researchers have failed to distinguish between locus of control and self-efficacy, these two constructs differ massively.

The position of control refers to beliefs that achieving a desired outcome (or avoid an undesirable outcome) is conditioned by his own behavior (outcome expectancy) and self-efficacy refers to the belief or hope that the person has the ability to effectively engage or execute a behavior that is necessary to lead to the desired result (efficacy expectancy). The two concepts are complementary and they are both important determinants of patient adherence to treatment.

Research on the role of self-efficacy in adhesion is consistent and robust. Considerable evidence suggests that self-efficacy expectations are related to specific membership in a variety of treatment regimens (Brady et al, 1997;. De Geest et al, 1995; Eitel et al, 1998; Ewart, 1992; .. Jensen et al, 1993, Kavanagh, Gooley, & Wilson, 1993). Most research on self-efficacy is based on cross-sectional designs, making it difficult to determine to what extent the estimated efficacy is a cause that influence future adherence or a simple consequence of the above differences in adhesion. A longitudinal study of Kavanagh et al. (1993) helped to clarify the causal pattern involved.

Other studies have found that adherence is best predicted by considering the expectations of control and self-efficacy beliefs (Christensen et al, 1996;. Kaplan et al, 1984), the idea that these two constructs can predict the joint behavior adhesion is consistent with more general theories about social learning and cognitive development and their influence on behavior (Bandura, 1986).

2.3.1.4. Social support

Research conducted by Christensen et al., 1992; Finnegan & Schuler, 1985; Catz, 2000; Kulik and Mahler, 1993, Levy, 1983; Stanton, 1987) suggests that the perceived availability and quality of the social support are attributes significantly correlated with adherence to treatment. For example, in a prospective study of fifty hypertensive patients it is shown that people who are satisfied with receiving social support often remain adherent to treatment and frequently use the special unit for medication and keep the same medication for a long time. (Stanton, 1987). Similar results have been reported among patients with coronary bypass (Kulik & Mahler, 1993), studies show that the effect of social support is stronger in adherence to treatment if the person has recently experiential high levels of stress related to current life (Griffith , Field and Lustman, 1990). This pattern is consistent with the pattern of stress-buffer support that the social support available or perceived becomes more important for the well being of the individual person as the stress level increases. (Cohen & Wills, 1985).

Research on this topic is inconsistent. Boyer et al, 1990;. Hitchcock et al, 1992;. Rudman, Gonzales, Borgida, 1999; Sherbourne et al, 1992 have shown that social support is not related or is inconsistently related to adherence in chronic diseases. Christensen et al. 1989; Dimond, 1979; Kerns, Weiss, 1994; Turk & Kerns, 1985 showed that family support perceived by the patient as well as peculiarities of family environment plays an important role in patient adherence to treatment especially is serious chronic diseases.

Although the evidence for the impact of social support in adherence support are not entirely consistent, there is convincing evidence showing that greater support leads to perceived satisfaction is associated with more favorable adherence to certain aspects of medical treatment. Regarding the impact of social network size, the studies undertaken have led to less clear results, social contacts being in some situations barriers to joining the medical prescriptions. The impact of family and social support specific aspects of the family environment has a significant impact on adherence to treatment especially in chronic diseases. The impact of social support on adherence by gender remains unclear and requires further investigation.

Social support is an important factor in both cardiovascular disease, intervening in recovery processes - where appropriate, and also in adjusting to the disease and changing health promoting behaviors to increase quality of life (S. Cohen, 1988; Helgeson & Cohen, 1996; Uchino, Cacioppo and Kiecolt-Glaser, 1996). How social support influences health is not clearly defined, its role is not yet clear as model or mediator. (Stone, Mezzacappa Donatoni, and Gonder, 1999;. Scanlan Vitaliano, Zhang, Savage, Brunett, Barefoot, 2001). Social support has a stress management buffer role and influences the emotional and behavioral changes (S. Cohen, 1988); can influence the immune system, but may act indirectly on behaviors related to lifestyle and health (Connell, Davis, Gallant, and Sharpe, 1994) or the social and psychological functioning, such as ability to adjust to disease (Hegelson & Cohen , 1996, Taylor, Falke, Shoptaw and Lichtman, 1986).

2.3.1.5 Patient-doctor relationship in adherence to treatment

How each of them influences:

1. Patient - is negatively influenced by poor doctor-patient communication especially if the patient has little knowledge about the disease
2. Medical system can influence patient attitudes by lack of access or poor quality of health services provided, complicated paperwork, patient inability to access these services or their high cost pharmaceuticals.
3. The doctor has a central role in all this process. Insufficient knowledge of medicine prices and low levels of job satisfaction are predictors of poor adherence to treatment.

For patients with hypertension, a strict control of blood pressure levels and a proper diet is a required condition. Almost always, antihypertensive medication is associated with the occurrence of adverse side effects for the patient and seemingly little beneficial effects, because when treating hypertension we are treating the cause not the effect.

Also simplification of the received instructions, and medication administration program is essential, and increasing the number of days the patient feels better is more important than reducing the number of medications. Eisen, Miller, Woodward, Spitznagel, Przybeck (1990), Schroeder, Fahey, Ebrahim (2004)

To improve adherence to treatment for hypertensive our target is not only to maintain low blood pressure but also to choose drugs with greater halving time, so that the

effectiveness of the medication should not be influenced by a missing dose thereby overcoming adherence imperfections Urquhart pin (1997); Urquhart (2002).

2.3.2 Organizational Risk Factors

2.3.2.1 Stress at Work

The research made for discovering of the causes of cardiovascular disease identified chronic work stress as a psychological factor that contributes significantly to the occurrence of cardiovascular diseases (Hemingway & Marmot, 1999; Krantz & McCeney, 2002; Rozanski, Blumenthal, & Kaplan, 1999).

In recent decades the emergence of chronic diseases related to stress and its impact on her health were examined using different theoretical models (Karasek & Theorell, 1990; Levi Bartley, Marmot, Karasek, Theorell, Siegrist et al., 2000; Semmer & Mohr, 2001; Siegrist, 2002b). There are two models to identify the impact of stress components from psychological work environment on health, namely:

2.3.2.2. Work stress models involved in cardiovascular disease

2.3.2.2.1 Work stress model (Karasek, 1979, Karasek & Teorell, 1990) which assume that the ability to control the labor situation is crucial to the health of workers, and

2.3.2.2.2. The effort - reward (ERI) model (Siegrist, 2002) suggests that reciprocity between effort and reward, and increased commitment to work, are important concepts in determining the individual's health and wellbeing. Since the introduction of this model by Siegrist in 1986, ERI model has gained a considerable attention especially within Japanese and European research; there are many studies that have used this model for the study of organizational health (Siegrist 1986, Siegrist, 2002; van Vegchel, the Jonge, Bosma, & Schaufeli, 2004).

ERI model emphasizes the idea of mutual exchange between efforts (physical and psychological stress induced by work) and rewards (salary, respect and safety). It is assumed that the lack of reciprocity between efforts and rewards (low rewards - high effort) can cause activation of the autonomic nervous system and increase the risk of coronary heart disease (Siegrist, 1996, 2002; Siegrist & Peter, 1996). According to the model, the adverse health can also be self-attracted by the comprehensive style known as the over-commitment. This style could worsen the imbalance of negative effort – reward consequences -which may damage health. A feature of the ERI model is that it distinguishes precisely between the situational component of the work environment, and a personal component of attitudes, behaviors and emotions.

2.3.2.3. Effort-reward imbalance and risk of cardiovascular diseases

In the past 10 years, numerous studies have collected evidence in favor of the hypothesis of this model, especially in terms of its involvement in cardiovascular disease (Bosma, Peter, Siegrist, & Marmot, 1998; Kivimäki, Leinu-Arjas, Luukkonen Riihimaki, Vahtera, & Kirjonen, 2002 Kuper, Singh-Manuux, Siegrist, & Marmot, 2002), and also the emergence of psychosomatic pathology (Niedhammer, Tek Starke, & Siegrist, 2004; Stansfeld, Bosma, Hemingway, & Marmot, 1998). Despite the growing number of publications, there is still a lack of knowledge regarding the relative contribution of the components of the ERI model, effort-reward and over-commitment, on the risk of cardiovascular diseases in employees.

CHAPTER III- The education for health in cardiovascular disease

3.1.The education for health in order to adopt a proper diet regarding the high blood pressure. Effectiveness of assistance-systematical review.

Suter, PM, Sierro C., Vetker, W., (2002) support a positive association with arterial high blood pressure and a high amount of salt intake, alcohol, proteins and lack of regular physical activity. They claim that using an optimal combination of nutrients (such as the DASH diet) is crucial to obtain optimal results. The authors consider it a realistic as well as a productive strategy that show the changing of five habits: the amount of salt ingested, the ratio of Na / K the amount of consumed alcohol, the balanced caloric balance and giving up sedentary life. Hooper, L., Summerbelle, CD, Thompson, R., Sills, D., Roberts, FG, Moore, HJ, Davey Smith G., (2012) in a study conducted on meta-analytic study on Cohrane database publications, MEDLINE and EMBASE up to June 2010 claim that dietary changes but not totally reduce fat have little effect (statistically) but leads to a significant reduction in the cardiovascular risks. Rees, Dyakova, Wilton, Ward, Thoragod and Brunner (2013) in a meta-analytic study conducted on 18,175 participants in 45 studies where 52 types of interventions were promoted concluded that diet interventions make their impact felt up to 1 year after implementation and long-term effects are unknown. The diet leads to a decrease of 2.61 systolic mmHg (95% they 1,31- 3.91) and 1.45 dia systolic mmHg (95% CI 0.68 to 2.22).

3.2.The education for health in order to adopt an active lifestyle. The efficiency of systematical review intervention.

The studies made in the USA show that only 25% of Americans achieve the recommended physical activity and that 29% do not perform physical activities regularly- Goldman, Smith (2002). The same authors highlight five major categories in a study on 380 meta-analytic studies regarding the: demographic, biological and health factors, cognitive and psychological factors, behavioral factors, social and environmental factors.

The increasing age is the most consistent predictor of reduced physical activity. Old people (over 60 years old) reduce the physical activity, 60% of them are no longer involved in physical activities Mc Donald, Garg, Haynes (2002), decline which occurs most to women. People with low socio-economic status are less involved in physical activities. Regarding the occupational status, studies are contradictory; some of them support a link between the physical activity and managerial positions (Haynes,

McDonald, Garg, Montague (2000), while others have shown that this relationship is very weak or nonexistent. The socio-economic level is a predictor to the adherence to physical activity, a low socio-economic level in association with reduced adherence to a program (of education) for health of the patients with cardiovascular diseases Haynes, McDonald, Garg, Montague (2000). Reduced participation in physical recommended programs is motivated by financial constraints and physical or internal limits. These people with a low socio-economic status lack social support and encouragement to introduce physical activities in their lifestyle as well as understanding physical activity benefits Rimmer, Hicola, Creviston Riley (2002)

The marital status is a controversial factor, there are studies that show a positive association of marriage with practice of physical activity, others report a lack of association Rimmer, Hicola, Creviston Riley (2002) and others argue that there is even a negative association. Salmon, Owen, Bauman, Schmitz, Borth (2000). The age influences negatively the adherence to treatment claiming that the adherence to physical activity decreases with age. However, the educational level, the history of physical exercises and the socio-cognitive variables (attitude towards exercise, self-efficacy, social support and perceived benefits) intervene in addition to the age factor (McDonald, Garg, Haynes (2002).

3.3.The education for health regarding the smoking cessation in the case of the people with cardiovascular pathology. The effectiveness of psychological-systematical review interventions.

Psychosocial interventions on smoking cessation have been effective in achieving smoking abstinence to patients with cardiovascular pathology compared with personal care. For all studies, the number of the patients who received psychological intervention was 2 times closer to give up: OR = 1.93 (95% CI = 1.39 to 2.69 n = 2923). It was a considerable heterogeneity among the individual studies χ^2 (18) = 64.75, $p \leq 00001$ (I^2 = 72.2%). mainly due to methodological limitations of the studies involved. (OR = 1.66, 1.24 to 2.21, n = 2,677). OR suggests that behavioral interventions cause smoking cessation compared with usual personal care. The studies which have validated self-reporting status of smoking by laboratory measurements showed lower rates of smoking cessation than biochemical studies where these checks did not exist. If abstinence studies are pooled, OR decreases from 1.99 (1.32 to 2.99) to OR 1.39 (0.95 to 2.04).

The meta-analytic study conducted by Barth and Bengel Critchley (2006) didn't highlight differences in efficiency among the various analyzed forms of treatment: behavioral intervention, self-help interventions and support by phone. Behavioral intervention had a significant effect on abstinence OR-1.65 (1.28 to 2.13), 10 studies n = 1.61 with low heterogeneity (I^2 = 31.8%). Telephone support was also effective OR = 1.58 (1.26 to 1.98) N = 11, n = 1635) and studies had a reasonable consistency (I^2 = 17.2%). As most studies have used behavioral therapeutic interventions and associated telephone support is difficult to separate the effects of these two interventions, The review performed by Barth and Bengel Critchley (2006) indicates that short-term interventions (i.e. no further contact or within 4 weeks after the initial intervention) were not effective (OR-A, 92 (A, 70-1 22), n = 4, n = 833, I^2 = 0%. When patients suffering from cardiovascular pathology were treated including a plurality of contacts further intervention, chances are significantly increased to

renunciation (OR, 1.98 (1.49 -2.65), N = 12, n = 1.844, I2 = 50.3%). There was a smaller discrepancy between the results of the study when they were grouped by intervention intensity proving the homogeneity research results both for the reduced intensity interventions- less than one month where X2 = 2.85, df = 2, p = 0.24 and for studies where interventions were intense where X2 = 11.81, df = 10, p = 0.30. The reduced intensity interventions to smoking cessation led to a low effect size Z = 0.15, p = 0.88, while interventions which were more frequent and an amplitude of the meetings more than a month caused extensive practical effects, the effect size being Z = 3.73 p = 0.0002.

The psychological interventions regarding the smoking cessation in the case of the patients with cardiovascular diseases are effective, cumulative OR for 16 studies included in the survey have shown a significant clinical effect after 12 months, OR, 1.66 (95% CI 1.24 to 2.21), waiver rate = 48.7% versus 38.4%. Barth and Bengel Critchley (2006). The abstinence rates are somehow stable as the long-term follow-up studies have shown that 80% up to 90% of people suffering from cardiovascular diseases who are abstinent for 1 year will remain nonsmokers for five years (33.34%).

The study shows that short-term interventions without further maintaining the next contacts are not effective on people with cardiovascular pathology. However, the minimum number of required contacts could not be identified.

3..4**. Tabag addiction models**

3.5. Types of Intervention for Improving the Adherence to Treatment

The most important types of interventions to improve adherence are shown in the following table

Table 3.1. Actions to increase patient adherence and Zillich andCarter (2004), Miller, Hill, Kottke, OCKEN (1997) involved strategies:

Actions of the Patient	Specific Strategies
□ Decide to control risk factors □ Objectives Negotiation- of arterial blood pressure level to be achieved (done with the personal physician) □ The development of skills for adopting and maintaining recommended behavior □ Monitoring the progress made towards achieving the objectives of the blood pressure □ Solving problems regarding the barriers in the way of achieving the objectives of maintaining a certain level	□ Rational understanding of the importance of commitment □ Development of patient communication skills □ Use reminding systems □ Development of the problem solving skills and the use of social support □ Defining the needs based on previous experience □ Rational Validation - looking for a justification to continue to follow the recommendations

of blood pressure	

Table 3.2. Actions of organizational health to increase the adherence to treatment and and Zillich andCarter (2004), Miller, Hill, Kottke, OCKEN (1997) involved strategies:

Organizational Health Actions	
The organizaţional health specialist must: □ Develop a supportive organizational environment for prevention, intervention and treatment of hypertension □ Ensure continuity with a provider of medical services □ Provide tracking and a reporting system □ Provide additional education and training to healthcare provider □ To provide sufficient material and time resources for health professionals to address problems in the organization	□ Develop specific training in behavioral sciences and ensuring all employees to these services (counseling on lifestyle, ensuring emotional support for patient) □ The use of strategies to increase adherence to treatment e.g. pre-preparation i.e. preparation in one day of the weekend of medication for all weekdays and placing them in boxes identifying the weekdays and techniques reminder refilling- example: set the phone to call at a certain time on Sunday requesting its master to refill the box of medicines with the weekly doses (reminder) □ Use reminders via phone calls □ Provides group counseling for patients and family □ Develop systems of electronic health records of employees □ Requires (supplies) continuing education courses in the field of communication and behavioral counseling □ Hire specialized behavioral counseling to enhance adherence counseling staff □ Develop a system of incentives based on the wishes of the patient and provider outcomes □ The request for storage of documents of continuous-monitoring arterial blood pressure level of the patient □ Obtaining data on the lifestyle of the patient at each visit □ Continuous improvement trainings

	focused on health education

CHAPTER IV- Romanian adaptation of Effort-reward imbalance Siegrist ERI scale

The scale consists of 23 items that are measuring on a Lickert scale in four steps and is structured into three subscales: effort, reward and over-engagement. Effort, the first subscale consists of 6 items concerning work environment requirements. Reward is measured by 11 items and is composed of three sub factors: financial reward, the respect reward and reward perceived as promotional opportunities and security of the job. In most analyzes this factor acts as one-dimensional factor.

The effort-reward reporting is a manner of objectification of the imbalance experienced daily by the person working. Reactions to stress and negative emotions make a person aware of the unfair exchanges, playing an important role in managing the emotional state. Over-commitment is a subscale and consists of 6 items. A high score indicates the presence of such features in a high percentage. Based on scientific literature that records the existence of three main factors of effort-reward imbalance -effort , reward and over-engagement- we used factorial analysis with direct rotation method of factors that allows them to correlate the varying intensity .

Table no. 4.5 Component factors of the effort-reward imbalance scale and explained variance

Component	Eigenvalori initial			Extraction Sums of Squared Loadings			Rotation
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	12.779	55.561	55.561	12.779	55.561	55.561	11.042
2	2.543	11.059	66.620	2.543	11.059	66.620	7.573
3	1.632	7.096	73.716	1.632	7.096	73.716	8.876
4	0.999	4.345	78.061				

The group of subjects of the population used for adjustment of reward-effort imbalance scale is 337 reward imbalance effort subjects A preliminary analysis of the correlation matrix shows that most items are positively interrelated, Bartlett's significance test Chi Suare (N = 337) = 2317.183, p <.05 as support the use of factor analysis. Testing the adequacy of the sample was made with Kaiser-Meyer-Olkin method (KMO), obtaining a value .73, value considered appropriate for achieving that factor analysis on the sample (Field, 2000 cited Sava 2004).

The factors identified are considered to be those presented by Siegrist (2002), identified structure representing the basic structure of the questionnaire.

Factor 1-factor explains 55.56% of the variance effort results
Factor 2 reward factor explains 11.04% of variance results
Factor 3-over-commitment factor explained 7.09% of variance results
After rotation, there was observed a strong influence of the first factor (11.04) followed by relatively close influences of the others two factors (7.57) and (8.87)

Factorial model matrix, but also the matrix of the factorial structure confirms grouping items on the subscales according to the theoretical model.

Romanian variant studies prove its discriminative values according to whether the gender of the person assessed, but also the age and education level, data being similar to those in the literature.
The internal consistency and test-retest reliability are adequate as can be seen from Tables 4.10 and 4.11

Table no. 4.10. The internal consistency for the subscale- adaptation for Romania for the reward – effort Siegrist imbalance.

	Effort (items=6)	**Reward (items=11)**	**Over-engagement (items=6)**
Male N= 130	.916	.931	.872
Female N= 149	.941	.937	.911

Table no. 4.11. Test-retest reliability for scale - adaptation for Romania for the reward –effort Siegrist imbalance.

Scale	**N**	**r (test-retest)**
Effort T0-T1	6	.825**
Reward T0-T1	11	.853**
Over-engagement T0-T1	6	.663**

T0- intial timestamp T1- 6 weeks after **p <.001

Therefore the measured dimensions scale effort-reward imbalance is stable, not fluctuating within short intervals in the absence of major factors of influence.

Table no. 4.12. Descriptive indicators and benchmarks for the Romanian version of the reward –effort Siegrist imbalance.

		Effort	Reward	Overachievement	
N	Valid	337	337	337	
Mean		19.36	26.73	17.11	
Std. Deviation		3.79	6.53	4.06	
Minimum		11.00	11.00	9.00	
Maximum		24.00	39.00	24.00	
		<12.00	<16.00	<11.00	Very Low
Percentiles	6.7	12.00	16.00	11.00	Low
	30.9	17.00	23.00	15.00	Medium
	69.1	22.55	32.00	19.00	High
	93.3	23.23	35.00	23.22	Very High

CHAPTER V
Individual and organizational risk factors in hypertension

5.1 Introduction

Hypertension is a real scourge of our century, representing a real public health problem. Being a multi-factorial disease where genetic predisposition combines with a poor lifestyle, identification of risk factors in order to establish coherent strategy in both primary prevention and secondary represents a priority in therapeutic management. Although genetic risk varies between 20% and 70%, doubling even for those with both parents hypertensive an important role in managing this disease consists in making lifestyle changes.

Desired changes involve the adoption of healthy eating behaviors, with an emphasis on reducing the use of salt, saturated fat, maintaining optimum weight and weight reduction for overweight and obese, associated with adopting an active lifestyle where 30 minutes of moderate physical activity are present on daily basis.

T he reducing consumption of stimulants such as caffeine levels and nicotine is also recommended.

Besides these individual factors, there also contribute a series of organizational factors, stress at work being on the first position. Effort-reward imbalance model was developed by Siegrist to emphasize those organizational environment factors that have a negative impact on the person and generate cardiovascular pathology.

5.2. Research Objectives

1. Identify individual risk factors (unhealthy eating habits, lack of physical activity, smoking) associated with the occurrence of cardiovascular pathology (hypertension and its complications) to persons engaged in work;
2 Highlight the personal risk factors (social support and self-efficacy) associated with the occurrence of cardiovascular pathology.

3. Highlight the organizational risk factors (effort-reward imbalance) associated to cardiovasculat pathology occurrence.
4. Highlighting the differences in the perception of effort, rewards and over-commitment in healthy individuals compared to those suffering from chronic cardiovascular diseases. (Hypertension and its complications)

5.3. Assumptions and design

1. People diagnosed with cardiovascular pathology are exposed to individual risk factors (unhealthy eating habits, lack of physical activity, smoking) to a greater extent compared with healthy individuals.
Intergroup two-factor design, 2x2, dichotomous variables, method: Chi Square

2. Exposure to develop cardiovascular pathology varies by gender.
Intergroup two-factor design, 2x2, dichotomous variables, method: Chi Square

3. Social Support and Low Self-Efficacy are more common in people with cardiovascular diseases compared with healthy individuals
Intergroup two-factor design, 2x2, dichotomous variables, method: Chi Square

4. Effort reward imbalance is more common in people with cardiovascular diseases compared with healthy individuals.
Intergroup two-factor design, 2x2, dichotomous variables, method: Chi Square

5. Effort, rewards and over- engagement of employees varies depending on their health. (healthy people versus people suffering from hypertension and its complications)
Intergroup uni-factorial Design Method: Student test

5.4. Method

5.4.1. Participants

The participants in the study were 216 in number, employees in five organizations in Oradea, men 65.3% of the sample analyzed, with a mean age of 40.55 years, with a low skill level. Participation was done on a voluntary basis. Employees were informed that they would participate in a study aimed at identifying risk factors for certain diseases and subsequently those individuals were selected who meet the study requirements. (Chronic disease versus healthy individuals -without people suffering from hypertension and its complications).

5.4.2. Tests administered

To achieve the objectives we administered the following tests:
1. ERI Effort-reward imbalance questionnaire (Siegrist, 2002)
2. Questionnaire focused on biographical and adherence to risk behavior (unhealthy eating habits, lack of physical activity, smoking)

5.4.3. Procedure

Questionnaires were administered as paper pencil without time limit under informed consent preserving the confidentiality. Administration was performed at the end of work sessions.

5.5. Results

Referring to the first hypothesis of our research that people diagnosed with cardiovascular pathology are being exposed to individual risk factors (unhealthy eating habits, lack of physical activity, smoking) to a greater extent compared with healthy individuals, the study highlights the associations with highly significant effect sizes ($X^2_{(1,216)}$=83.51 significantly p<.001)- r^2=,386 for eating habits, $X^2_{(1,216)}$=62,025 significantly p<.001.- r^2=,287 highly effect for physical activity and ($X^2_{(1,216)}$=67,814 significantly p<.001) r^2=,313 for smokers. Which allows us to certainly state that these associations clearly appear for the persons with cardiovascular diseases, as literature cites.

These risk factors are elements on which the following chapters will focus.

Different prevalence of hypertension by gender membership could not be proven within the study, $X^2_{(1,216)}$=6,7 significaltly p=.01 but r^2=,031-low sizes effect although existing national studies show a stronger presence of this disease in female individuals in Romania. SEPHAR Study II (Darabont, George, Babes, Pop, Thomas, Vasilecu, Dobreanu, Taut 2012) study showing a sketch of hypertensive patients as being "female, average education level, low income and style sedentary life". In addition to gender affiliation, other elements of the sketch can be found in this research. Employees with a low level of social support develop cardiovascular pathology in a higher proportion compared to employees who have a high level of social support (X2 (1,45) = 10.65 significant at a threshold of p = .001) r2 = 23, which indicates the existence of a strong effect of the combination of a low social presence of cardiovascular pathology.

Employees with a low level of self-efficacy develop cardiovascular pathology in a higher proportion compared to employees who have a high level of self-efficacy (X2 (1,49) = 12.25 significant at a threshold of p <.001) r2 = 25 which indicates the existence of a strong effect of low self-efficacy association with the presence of cardiovascular pathology.

The third hypothesis concerns the association of effort reward imbalance cardiovascular pathology, ($X^2_{(1,216)}$=66,75 significantly p<.001) r^2=,309-high sizes effect, results consistent with the literature. Peter and Siegrist (2000) . When referring

to the fourth hypothesis, which postulates that effort, rewards and over-commitment of employees varies depending on their health (healthy people versus people suffering from hypertension and complications thereof), the study results show that hypertensive individuals are subject to a greater effort at work compared with healthy individuals , [t(214)=8,7 , p<.001** ; r^2=,261 high sizes effect] they receive lower rewards compared to healthy individuals, [t(214)=-6,23 ,p<.001** ; r^2=,157 high sizes effect]data consistent with Tsutsumi & Kawakami's research (2004) Regarding over-commitment undertaken, the study did not reveal significant differences, [t(214)=,798 , p=.426 ns] while literature and studies are contradictory. Due to the impact analysis results over-commitment will not be objective studies UMAT, I will put emphasis on effort-reward imbalance. The third hypothesis proves the existence of a relationship of strong association between the social support and low self-efficacy and the presence of cardiovascular pathology to employees, a reason to be analyzed further on as moderator personal risk factors in interventions to be carried out. These results support the HAPA model. The self-efficacy influences the planning processes of initiation, maintaining, and managing behavior change relapses, thus, being involved in cognitive factors and situational factors are influenced by the social support the person receives.

CHAPTER VI
IMPACT OF HEATH EDUCATION PROGRAMS ON THE QUALITY OF LIFE IN HYPERTENSIVE PATIENTS

6.1 Introduction

Quality of life is a term which contemplates the welfare of a person's emotional, social and somatic. Carr and Higginson (2001) considered the main determinant of quality of life measure the health assessment results consistent with the own personal ideal model.
Recent research shows that the analysis of quality of life in patients with hypertension is an important aspect that should be considered as a lower perceived quality of life is a risk factor for subsequent complications and subsequent cardiovascular events (Li, Liu, Puente, Li Jiang, Jin, Ma, Kong, My, Hey, Ma, Chen, 2005). They showed - in a study of 4510 people with hypertension from a total of 9703 participants present study - using multiple linear regression - that patients with hypertension have a lower quality of life compared with people without this condition while the control age, sex, socio-demographic and co- morbidity. Treated patients whose blood pressure is within normal limits (controlled) have a high quality of life scores compared to those who control a lesser extent the blood pressure.

Also, by its permanent nature from installation time, hypertension has strong effects on self-perception of the individual that significantly alters compared to normal hypertensive patients or other clinical disease (non-chronic) (p <0.0005) (Stein, Brown, Brown , Sharma, Hollands and Stein, 2002). The authors obtained these results on a number of 385 participants of which 188

hypertensive. These authors showed that a low perceived quality will have a negative effect on both drug therapy compliance and the steps to change lifestyle.

A trend in the opposite direction of the blood pressure values and quality of life is also reported within the study done by Batey, Kaumann, Racsyinski, Hollis, Murphy, Rosner (2000) on 342 participants hypertensive patients, decreases in blood pressure are associated with an increase in quality of life.

Based on this research we considered quality of life as an effective way to operationalize indirect impact adherence or non-adherence to individual health education programs in hypertensive patients and we aim to highlight the impact of proposed health education programs on the quality of life of people hypertensive.

6.2. Objectives

1. Highlight the impact of health education programs on quality of life of hypertensive patients.
2. Revealing effects of perceived family social support on the development of quality of life in patients diagnosed with hypertension included in health education programs. (this is about the promotion of physical activity programs and adopting a healthy eating style).

3. Identifying factors that moderate the quality of life in patients with hypertension who are at the stage of onset of disease: self-efficacy, social support received from family, the degree of normalization of hypertension and type of health education program at the patient adheres.

6.3. Assumptions and design

1. We assume that adherence to programs of health education resulted in improved quality of life in patients with hypertension.

Uni-factorial design, intergroup; Method: Student test

Patients with hypertension participating in health multi-component education programs will have a quality of life superior to that of patients participating in health education programs-component.

Uni-factorial design, intergroup,; Method: Analysis of variance

3. Patients with hypertension who at the time of diagnosis receive a high family social support will have a far more favorable developments in terms of quality of life compared with patients who have a family social support perceived as medium or low.

Uni-factorial design, intergroup,; Method: Analysis of variance.

4. Life quality in patients with hypertension who are at the stage of onset of the disease is moderated by self-efficacy; social support received from family, the degree of normalization of hypertension and type health education program at the patient adheres.
Multiline regression predictive-explanatory purposes

6.4. Method

6.4.1. Participants

The total number of subjects who participated in the study was 164 of which adhered to at least one program are 116 people, representing 48.94% of a total of 237 persons who were requested and have been diagnosed with hypertension due to routine controls and compliance with eligibility criteria (essential with a minimum general education and an IQ greater than or equal to 80 without known psychiatric disorders a and adherence to medication)
Subjects are coming from Oradea metropolitan area.

Patients were invited to participate in a presentation that was intended to encourage involvement in physical activity and awareness of the impact of diet on the subsequent evolution of the disease. The presentation ended with a description of proposed programs, focused on their goals and skills acquired by the participants during the program, and in the end they were asked to complete a questionnaire consisting of four questions targeting their willingness to participate in programs of intervention. Of 186 people who said they want to be included in the program, 164 were present and joined at least 116 joined a program. Participation was voluntary. Average age of participants was 43.0 years (44, three years for women and 41 for men four years). They come from rural areas in the proportion of 70.68% with general studies or average 77.58%, 81.89% married with an average income of 3.63 minimum wage, women 58.62% and an average 2.51 family members.

The control group that has similar characteristics.

6.4.2. Tests administrated

To achieve the objectives we administered the following tests:
1. Quality of Life Scale Short Forms SF-36 (Ware, Kosinski, and Keller, 1994).
2. Self-efficacy scale feeling (Schwarzer and Jerusalem, 1995)
3. Multidimensional SMSSP scale for perceiving social support (Zimet, Dahlem, Zimet, Farley, 1988)

6.4.3. Procedure

People diagnosed with hypertension were invited to a presentation focused on hypertension, focusing on risk factors and special occasion modifiable risk factors who were asked to complete the questionnaire by expressing interest in participating in educational programs health. Each month, patients identified in the previous month who were interested in participating in the program were invited to the education program. Activities were accompanied by the provision of educational brochures and leaflets. Health educations programs have been included patients were:

1. Eat Healthy! An education program focused on reducing the intake of salt, fats and carbohydrates and replaces them with fruits and vegetables. Adherence was assessed

by self-reporting.

2. Physical activity, my friend! A program focused on education for active lifestyle requires a moderate intense activity at least three times per week with a minimum of thirty (30) minutes. Adhesion is measured by self-reporting.

3. Live Healthy!
Combines the two previous programs.

Each program was divided into three parts:

1. Provide information on the consequences of unhealthy eating and lack of physical activity on hypertension and providing informational materials;

2. Sessions of group counseling -2 sessions- first focused on solving the problems in adopting a healthy behavior accompanied by demonstrations and the second focused on discussing difficulties and ways to solve them;

3. Single support and follow-up (one meeting per month for 2 months, followed by monthly telephone conversations -1 discussion for another 2 months). Assessment of post was made between five months and a half and six months and a half by assessing quality of life and the degree of adherence to education programs.

6.3. Results and discutions

Regarding the type of health education program in which the person is involved we find that multi-component programs favors a quality of life superior to that of the people involved in the single-component program vital component [$F(2,113)=3,34$ la un $p=.039$*, $F_{Levene}(2,113)=0,549$ la un $p=.579>.05$, post –hoc Hochberg GT2 $p=.049$ and size effect $r^2=.049$] programs and in reducing the impact of harsh emotional state activities allowing [$F(2,113)=6,24$ la un $p=.003$**, $F_{Levene}(2,113)=3,375$ $p=.038<.05$ post –hoc Games –Howel size effect $r^2>.06$ in all cases] the person also to make a more positive self own mental health. .[$F(2,113)=5,54$ la un $p=.005$**; $F_{Levene}(2,113)=1,22$ la un $p=.296>.05$ post –hoc Hochberg GT2 $p=.004$ size effect $r^2=.089$]
Referring to the impact of social support, it was concluded that patients with hypertension who perceived receiving high social support from family, [$F(2,113)=6,75$ la un $p=.002$** $F_{Levene}(2,113)=5,76$ la un $p=.004$, post –hoc Games – Howel $r^2>.06$ in all cases] improve their quality of life considerably longer than patients who perceived receiving medium social support from the environment in terms of physical functioning, impact of dysfunction role is diminishing, overall health increases, as well as physical health composite score as a result of their participation in health education programs.

A similar evolution is encountered between patients who perceive receiving low social support from the family, compared to those who perceive that they receive medium social support from the environment in the sense that the latter considerably more improve their overall health and function better in current roles related to work

and personal life.

Regression model allows an estimation of the quality of life much more accurately on the subscales physical quality of life compared with estimates made on the basis of average values and the impact of self-efficacy as a predictor of quality of life is certainly both statistical and practical - self-efficacy effect size as a factor in the regression model in most subscales above average,
In addition to cognitive factor, an important role is played by the situational factor representing social support that person receives. Such perceived high family social support facilitates the physical functioning of the person (ß = .226) and attenuates the impact of patient perceived some physiological changes occurred that he underestimates the scale (ß = .195) while facilitating involvement in social activities (ß = .233).
in what concerns the current health perception as a predictor (controlled- uncontrolled hypertension) a patient who knows his blood pressure levels are within normal limits due to medication administered will be retained in the individual activities required by the roles in the community, the family, and the organization where you work is taking place (ß = -.222) and will pay close attention to any physiological indication he believes may be an alarm signal for the disease (ß = .230).

The study shows that the involvement of patients in education programs for healthy eating behavior and active life through the practice of physical activity are important factors in improving the quality of life of the hypertensive patient. Together they have an important role self-efficacy and social support provided by patient's family - as support mechanisms for this laborious process, modulated by the manner the patient perceives his current health situation (controlled or uncontrolled hypertension).

CHAPTER VII
The effectiveness of psychological interventions in smoking cessation fot hypertensive people - moderating factors

7.1. Introductions

Krantz & McCenez (2002) identified chronic work stress as a psychological factor that contributes significantly to the occurrence of cardiovascular diseases. The emergence of chronic diseases related to stress and its impact on health were examined using different theoretical models (Karasek & Theorell, 1990; Levi, Bartl, Marmot, Karasek, Theorell, Siegrist et al., 2000; Semmer & Mohr, 2001 Siegrist, 2002b).
The effort - reward - instability (ERI) is the model (Siegrist, 1996) suggesting that reciprocity between effort and reward and commitment to work, imposed in determining the individual's health and wellbeing especially since this model was created specifically for cardio-vascular pathology. Since the introduction of this model by Siegrist in 1986, ERI model has gained considerable attention especially within Japanese and European research, where there are many studies that have used this model for the study of organizational health (Siegrist 1986, Siegrist, 2002b; van Vegchel, the Jonge, Bosma, & Schaufeli, 2004).

In addition to the factors mentioned above, the stress induced by work is influenced by a number of peculiarities of the individual, such as a sense of coherence (Antonovskz, 1979, 1987; Udris, 1990) or social support (Schwarzer, Knoll, & Rieckmann, 2003).

Belkiz (Belka Landsbergis, Schnall et al., 2004) concluded that there is a strong and consistent evidence of an association between exposure to work stress and cardiovascular disease, especially among men.

Conditions of high effort and low reward have repeatedly demonstrated that they are positively associated with incident coronary events (Bosma, Peter, Siegrist et al., 1998; Niedhammer, Goldberg, Leclerc, David, Bügel, & Landre, 1998 Peter, Alfredsson , Knutsson et al. 1999, Siegrist & Peter, 2000, Siegrist, Peter Jung et al. 1990).

Smoking is considered one of the major risk factors for cardiovascular disease. Compared with nonsmokers, the chances of cardiovascular diseases Odds ratio (OR-odds ratio) is almost two times higher (Tunstall-Pedo, Wodward, Tavendale, Brook, McCluskez, 1997). Recent studies estimate in patients with cardiovascular diseases who stopped smoking, mortality rates decreased by 36% (Critchlez and Capewell, 2003). Studies show as beneficial even the simple advice focused on breath control, leading to increased smoking cessation rates range from 1.45 to 1.98 or compared with smokers non adherent to smoking cessation interventions (Silagz, Stead, 2004). Implementing therapeutic techniques group showed a reduction of almost half the number of smokers compared with patients who did not participate in anti-smoking programs or- 1.97 (1.57 to 2.48) (Stead, Lancaster, 2005).

However, modern approaches in occupational health interventions theory go as low cost and group interventions are most popular with this view. (Mastroianni, Staberg, Walker, 2014)

Meta-analitic study conducted by Barth, Critchlez and Bengel (2006) on patients with cardiovascular diseases, smoking, shows that behavioral therapeutic approaches in combination with motivational techniques, patients receiving this type of psychosocial intervention quit smoking twice more than those who were subjected to interventions that go on one therapeutic approach: OR = 1.93 (95% CI = 1.39 to 2.69 n = 2923). There was a considerable heterogeneity between individual studies $\chi 2$ (18) = 64.75, p $\leq$ 00001 (I2 = 72.2%). This heterogeneity is mainly due to methodological limitations of the studies.

One such program is the schedule I propose, that combines the behavioral-emotional-rational approach with the model of risk and protective factors (Stead and Lancaster, 2004).

7.2. Objectives

1. Show the importance of social support perceived- post intervention on the effectiveness of anti-smoking intervention depending on the particular organizational environment;
2. Identification of psychosocial factors in the organizational environment that act as risk factors or moderating factors within organizational health intervention aimed at improving well-being in rural organization by reducing smoking;

3. Highlight the factors that moderate the effectiveness of anti-smoking intervention in the organizational environment in order to implement occupational health programs - targeting tobacco addiction with maximum impact on group work - taking into account the specific features of the organizational environment and pathology that presents those participating in the research.

7.3. Assumptions and design

1. Organizational Support Group "peer" enhances the effectiveness of anti-smoking intervention.
Intergroup two-factor design, 2x2, dichotomous variables,
Method: Measures of association RR and OR

2. Reward imbalance perceived by the employee work increases the risk for relapse (abstinence from smoking decreases your chances).
Logistic regression - test Mantel-Haenszel test and Wald
3. Post treatment perceived social support is an important predictor of the duration of abstinence. A higher perceived social support at the end of the intervention - especially from support- environment associated with smoking behavior one year after completion of the intervention.
Design two-factor mixed, inter and intra-group, 2x2;
Method: - Analysis of variance.
- Regression Analysis multiline purposes
4. Reward imbalance at work and the type of intervention that confronts the individual are important predictors of tobacco abstinence period. A steady state - Works perceived reward individual and group intervention to support "peer" increase the chances that the person to abstain for a longer period of time.
Multiline regression predictive-explanatory purposes

7.4. Method
7.4.1. Participants

Subjects participating in the study were the number of 60 persons, employees in two organizations OMA that for confidentiality reasons we shall call the “PA” organization and the organization "PRO" males from rural areas 68.33 % with an average age of 46.33 years. Employees of both organizations were informed about the possibility of free participation in an anti-smoking intervention program, supported by the company. Participation was on a voluntary basis subject to compliance with the eligibility requirements of which the most important were smoking more than 10 cigarettes per day, have been diagnosed with cardiovascular diseases (hypertension hypertension stage 1 or 2) have minimum general education and an IQ greater than or equal to 80 without psychiatric disorders.

In order to meet the eligibility criteria on the medical side we worked with an occupational physician. The sample consisted of general school graduates, three persons representing 5% of vocational school graduates - 26 (43.33%) and 31 graduates High School - 51.66%. In terms of marital status 9 or 15% were unmarried, 47 married ie 78.33%, 3 divorced ie 5% and 1widowed - 1.66%. Among the

unmarried, divorced and widowed 11 said they currently live together in concubinage, representing 84.61%.

7.4.2. Tests administered

To achieve the objectives we administered the following tests:
1. Multidimensional SMSSP social support perception scale (Zimet, Dahlem, Zimet, Farla, 1988)
2. Effort-reward imbalance ERI questionnaire (Siegrist, 2002)
3. Safety assessment related to smoking behavior

7.4.3. Procedure

Employees who have announced their intention to participate in the anti-smoking from the two organizations were invited to complete a questionnaire which included biographical data - age, education level, marital status at the time, medical data-knowledge of suffering of any disease or undergoing treatment- data on tobacco use (duration, average amount per day) as well as data related to family, ie if the partner is a smoker or not. In order not to distort the results, participants were told about the existence of eligibility after completing the questionnaire phase of selection. Participants were also asked about their willingness to participate in leisure, weekly or biweekly to anti-smoking intervention program. Participants were informed by representatives of those organizations that participation in the program will be conditional on signing an undertaking not to leave the organization in the next 12 months, after completing the anti-smoking program. Violation of engagement implied obligation of payment from the employee. The purpose of this engagement was to avoid inclusion in the program of people who wanted to leave the organization in the next period thereby avoiding a large number of experimental deaths. Provider contract stipulated a number of clauses of which the most important are: free participation in the program, a commitment to the person's availability to participate in assessments follow-up and a pledge of confidentiality on persons or organizations involved.
From each organization, 30 people participated in the program, of which 15 were involved in activities that allow the establishment of a group of organizational-support (peer group) - in the activity context developed. Both companies are privately owned. All participants were evaluated in terms of intelligence with the Raven Standard, depressive tendencies were quantified with the Beck scale and Freiburg depression subscale, only people admitted were the ones with T scale less or equal to 50. Before the start of the intervention all participants were included in an evaluation session in which they were provided:
1. Multidimensional SMSSP scale for perception of social support (Zimet, Dahlem, Zimet, Farla, 1988)
2. Effort-reward imbalance ERI questionnaire (Siegrist, 2002).
Antismoking training was conducted over six weeks in the first 3 weeks of which were bi-weekly meetings, followed by weekly meetings, a total of 9 sessions. At the end of the intervention the perceived social support was reassessed. Tobacco was monitored by individual cards and then monthly monitoring smoking status was performed at 3 months, 6 months and 1 year after intervention finalizing the program.

7.5. Results and discutions

Research is focused on inclusion studies researched issues such as the impact of peer group organizational reward imbalance and work - as moderators of organizational environment factors.

The study shows that social support group "peer" begins to make its presence felt to 6 months after completion of the intervention, its effect is reduced, $X^2_{(1)6\ luni}$=0,635 r^2=0,0105 however, intensified afterwards- for 1 year after completion percentage of smoking intervention for intervention the support group is double compared to the percentage of smokers in the intervention group with "peer". $X^2_{(1)12\ luni}$=4,444 significat at p=.035 and size effect r^2=0,074
These results allow us to state that the support group acts as a buffer against relapse especially between 6 months 1 year by the fact that social support group "peer" operates as a buffer of stress perceived by the person as the others - that the group "peer "- will give the right help as per the belief that others will provide resources to increase their resilience thus changing situation assessment and reducing stress thereby facilitating analysis with a high degree of objectivity, where the natural consequence is a "solution" with a level of rationality increased versus "irrationality" - allowing them to choose the adaptive alternative.
Research shows a relative risk of relapse in reward imbalance condition - provided steady employment versus RR = 1.61, so people who work in perceived conditions of reward-work imbalance are 1.61(95%CI=0,970-2,694) $r^2(1)$=4,24, p=.039*) times more likely to become smokers, compared with people who perceive the work environment as balanced in terms of applications, results verified by logistic regression Wald-test.(ß=1.33 ; p=.027*) It was found that the risk of relapse is significantly higher in -over 1.5 times – if providing interventions without support group –compared with the intervention use accompanied by support group. OR=3.143 (95%CI=1,066-9,267), $x^2(1)$=4,44, p=.035

Regarding the variation of perceived social support by people in the post-intervention as a result of the participation to intervention, changes were noticed, more exactly an increase of the social support perception received from family[F(1,58)=85,474 p<,001** size effect r^2= ,596] and friends [F(1,58)=0,112 p=,739ns] and a decreased social support perception as received from others. [F(1,58)=5,183 p<,027*, size effcet r^2= ,082]

Analyzing the factors involved in predicting abstinence period we find that social support is a key factor and the perceived social support received from family.(ß= .639 ; p<.001**). has the highest impact. However a protective role for relapse to smoking is also played by perceived social support as received from others .(ß= .347 ; p<.001**)while perceived social support from friends (ß= -.248 ; p<.001**) has negative effects by reducing the period of abstinence.
-Reward-work Imbalance intervenes also in predicting the abstinence period.
An organizational environment with imbalance between demands and rewards present smoking increased risk of relapse. .(ß= .214 ; p<.001)

Regression analysis also highlighted the positive impact of the group "peer" as a part of the organizational environment, this showing a protective effect in reducing the risk of relapse. .(ß= .208 ; p<.001**)

CHAPTER VIII CONCLUSIONS. CONTRIBUTIONS AND LIMITATIONS

In theory, the research approaches the wellbeing of the patient and implicit assesses the health state of the patient with hypertension by indicators of quality of life that has been less used in Romania, even if adherence evaluation is based on self-reporting (widely used in Romania) is strongly influenced by bias. From this point of view the present research attempts to make an assessment with a higher degree of objectivity, the utilized scale being SF-36, used as an instrument of quality of life as enshrined in the literature and allowing the comparison of quality of life characteristics for different categories of patients and between patients and the general population. Also, this approach allows a clearer evidence of the impact of health education programs on various components of the quality of life.

On a methodological level, contribution comes through Siegrist (2002) effort-reward imbalance scale adaptation on the Romanian population. Research is also distinguished by modifying established intervention approaches and proposing intervention approaches whose effectiveness has been verified in this study. Although cognitive-behavioral approach is common in the literature as a component of tobacco addiction programs, the emotional- rational-behavioral approach was little used until now. This research contributes to the methodological level intervention program conducted which is a relatively short time duration - 6 week program that combines the emotional- rational-behavioral approach with the risk model and protective factors (Stead and Lancaster, 2004) and proved the validity of the results obtained are similar to other smoking intervention program group.

Program developed lies in the trend of recent studies of occupational health interventions that promote Mastrorianni, Storberg-Walker (2014) low cost and is correlated with the socio-economic reality of our country.

On a practical level I consider the two issues to be a defining contribution. The first is health education program focused on promoting healthy eating behavior and focused mainly on salt consumption - the major risk factor and the distinction between fat intake that have negative impact on the health of the patient and fat intake that are rich in omega3 and omega 6 - for the last ones, increase consumption is recommended for the hypertensive patient since they act as protective factors.
The second important aspect is the intervention of quitting smoking in organizational environment, through the manner it was done by building support “peer” groups as a supportive element of intervention.

The results of this study can be used in the proposals for modifying laws to promote primary and secondary prevention programs to support the mandatory inclusion of psychologists in health and safety committees work to assess the risks to employees, the introduction of health legislation and safety at work of legal regulations to provide employers the opportunity to allocate a sum equivalent to 3.2% of net salaries of employees to organize occupational health programs focused on risk factors present in

their employees to be deductible.

1. The level of employer (especially in the private sector) may propose active measures to support a healthy lifestyle as an alternative for employees. Studies show certain limits:
   First thing I would mention it is related to the selection of subjects.
   Participation is voluntary, patient motivation for change was one of the factors that influenced the choice and is a source of error in evaluating the effectiveness of programs.
   Another source of error is given by subjective evaluation (through self-reporting) status adherent or non-adherent to health education programs Different gender distribution was another limitation of the research, the percentage of female is higher than men but consistent with other specialized research proving a higher rate of adherence to programs of health education among women and the prevalence of hypertension is higher among women in Romania (Dorobantu Darabont Ghiorghe, Babes, Pop, Thomas, Vasilescu, Dobreanu, Taut, 2012).
   Following a favorable cost-benefit ratios society, implementing organizational policies of health education programs to employees will be a priority next year.

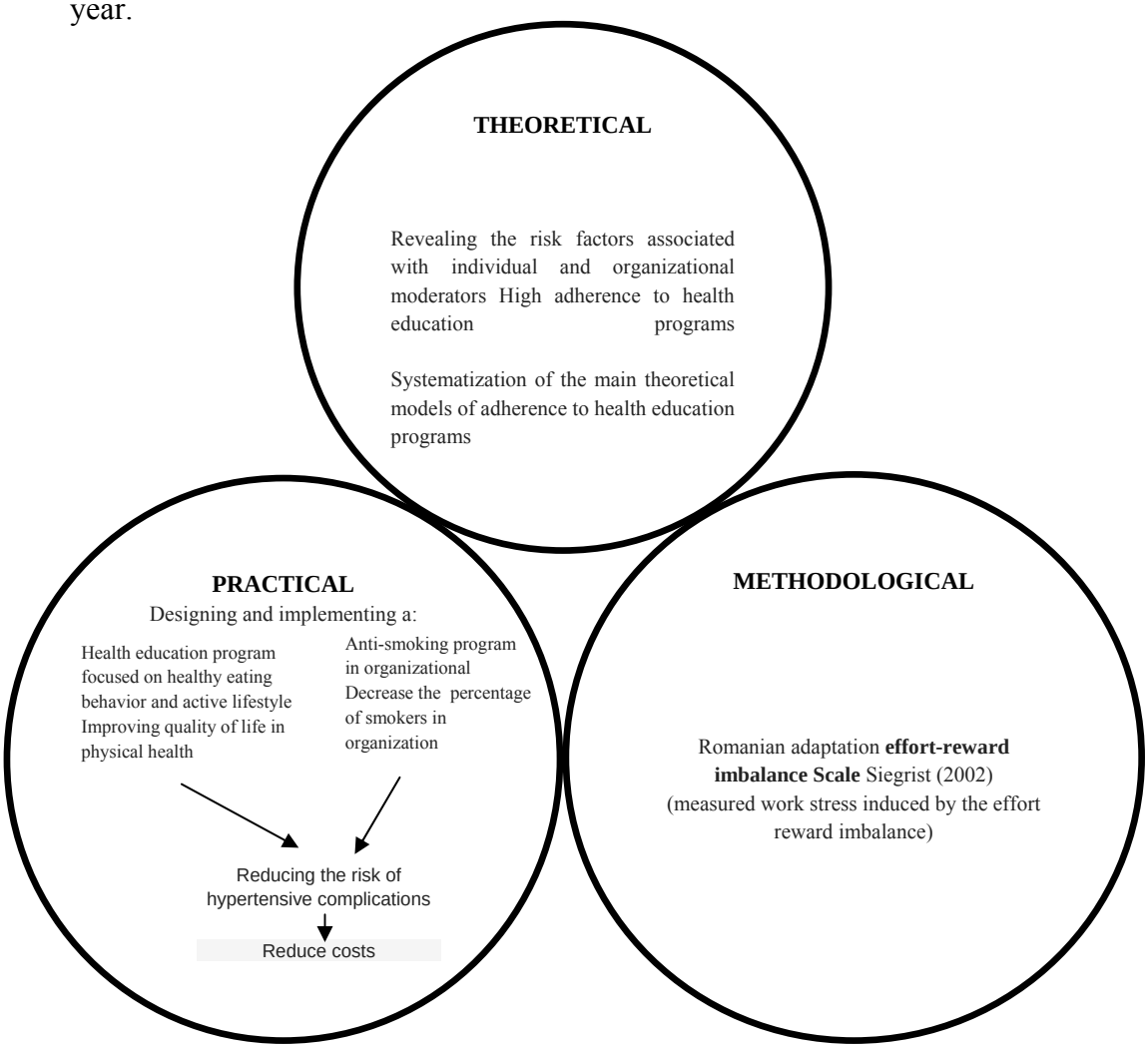

Fig.1 Theoretical, Methodological and Practical Developments of the Thesis

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