BURNOUT AMONG PSYCHIATRIC NURSES

BY

KONSTANTINOU ADAMOS – KONSTANTINOS

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TECHNOLOGICAL EDUCATIONAL INSTITUTE OF THESSALY

SUPERVISOR: DR. BELLOU VICTORIA

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Executive summary

Burnout is described a state of depletion of a person's resources and energy resulting in apathetic and impassive behavior towards others, having dysfunctional repercussions on the individual, and adverse effects on organization, such as turnover intention, low performance and absenteeism. Even severe disability has been related to burnout, fact that points the importance of the phenomenon. It is widely accepted that there are three dimensions of burnout: emotional exhaustion, depersonalization and personal accomplishment.

Mental health nurses compose a pretentious occupation since the nature of mental illness is special. Nurses have to cope with aggressive patients, severe, incurable illnesses, like schizophrenia and dementia. The role of caregiver, sometimes they undertake, is very stressful. Contradicting results derive from literature as for the burnout levels in mental health nurses. Some researchers demonstrate low levels of burnout compared to other nurses or other occupations. On the other hand studies underlie the high prevalence of burnout among psychiatric nurses.

Although an enormous amount of data have been produced by numerous of researches referring to burnout, there is lack of research in the private mental health care sector in Greece.

Many organizational factors have been found to relate to burnout. such as job satisfaction, organizational commitment, role conflict, support, workload, and rewarding. Individual characteristics such as personality traits and socio-demographic characteristics (age, experience, marital status) relate in different ways to burnout.

The aim of this study is to measure burnout levels in mental health nurses from the private health care sector of Larisa, Greece, investigate which factors relate to burnout and in what direction and create models that predict each of the three dimensions of burnout.

The sample consists of 78 mental health nurses from four psychiatric clinics in the region of Larisa, Greece. Participants are mainly women, married with children, with poor education and work mostly in day and night shifts.

Self-administered, structured questionnaires were distributed to nurses. Return rate was (33.6%). The measurement instruments used are i) Measure of Job

Satisfaction (MJS) (Traynor and Wade, 1993), ii) Maslach Burnout Inventory (Maslach, and Jackson, 1986), iii) Allen and Meyer's (1997) Organizational Commitment revised Scale and iv) Role Conflict Scale and Role Ambiguity Scale (Rizzo et al., 1970).

Results were generated with statistical analysis (SPSS 21.0). Specifically, ANOVA, independent samples t-test, frequencies, descriptive and multiple linear regression analysis were the statistical tools used. Research hypotheses formed according to the objectives

High burnout accounted from the 10.3% of the sample (high level in all three dimensions). Emotional exhaustion's high levels reached 53.8%, higher than reported in the literature. Depersonalization and personal accomplishment levels were moderate (24.4% & 25.6% respectively). Single and men, so as nurses working also night shifts seem to be more prone to burnout. The more experienced the nurse the lower the burnout, as it is demonstrated.

Role conflict and job satisfaction subscales correlate with burnout (especially with emotional exhaustion) with a moderate/strong, statistically significant way. Role conflict has a positive relation while job satisfaction has a negative one. Organizational commitment correlates weakly to burnout, result that partly disagrees with the literature.

Best predictors of burnout are role conflict, satisfaction with pay, satisfaction with workload, satisfaction with training, nursing experience and serious family issue. These results agree with the literature.

The results indicate the need of managerial intervention in order to reduce or even better to prevent burnout among mental health nurses. Psychological support, operation management techniques, training and team building strategies are some of the suggestions of the author.

Major limitations of the study is the small sample (N=78) and the low response rate (33.6%). Some methodological issues came up after using job satisfaction as controller in the correlations between organizational factors and burnout (weakened the relations).

It is recommended for further research to study differences of organizational factors related to burnout between private and public mental health care sector.

Similar studies and this one should include nurses from all over Greece (larger population, larger sample.

To conclude, the importance of studying burnout in mental health care nurses is high since stress in this special occupation is prevailing. Increased needs and demands for better health services along with the economic crisis in Greece address the need of confrontation of burnout.

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Introduction

Human resources are the core of the health care industry and an effective health care system depends on the quality, performance and the right distribution of these resources (Firth et al., 2004).

Each organization has the need of competent employees and straggles with different ways to keep them satisfied in order to continue working within the organization and provide their valuable services (Firth et al., 2004).

The main body of the human resources in the health care industry consists of nursing staff. Nursing has been identified as a stressful occupation (Marshall, 1980; Bailey, 1985; Duquett et al, 1994; Riding and Wheeler 1995a, 1995, b). Stress affects individuals in terms of health and job dissatisfaction. It affects also the organizations in terms of absenteeism and turnover, which impact upon the quality of patient care (Price and Mueller, 1981; Cronin – Stubbs and Brophy, 1985; Dawkins, Depp, Selzer, 1985; Kasl and Cooper, 1987). This negative attitude towards work also results to bad labor relations, errors at work and low level of healthcare quality (Maslach et al, 2001). In England, 40 million work days are lost every year due to disorders caused by stress. It was stressed that 30 million dollars have been spent in Australia due to job stress. In US as well, overall 550 million work days are lost due to problems related to stress (Hoel et al 2001).

As a prototype of stress, job burnout is being increasingly recognized as one of the most serious occupational health hazards (Greenglass and Burke, 2002).

Burnout is long-term reaction to occupational stress and appears mostly to those practicing social vocation (Gabassi et al, 2002). The etiology of burnout syndrome is multidimensional, as research has proved the impact of psychological, social educational and financial factors in its configuration. Professionals that have frequent contact with individuals are more sensitive to develop burnout (Cordes & Doherty, 1993; Vegchel et al, 2004).

Work stress and burnout remain significant concerns in nursing, affecting both individuals and organizations. For the individual nurse, regardless of whether stress is perceived positively or negatively, the neuroendocrine response yields physiologic reactions that may ultimately contribute to illness (Selye, 1956). Hospitals in

particular are facing a workforce crisis (Jennings, 1994). The demand for acute care services is increasing concurrently with changing career expectations among potential health care workers and growing dissatisfaction among existing hospital staff (American Hospital Association, 2002).

Nursing staff face working places with blood and urine, disturbed sleeping pattern, frequent emergency situations, inappropriate expectations from patients and their relatives, insufficient personnel and lack of authority in decision-making, all of which can cause job burnout for nurses (McAbee, 1999; Leiter & Maslach, 1988; McGrath, 2003).

Bearing in mind the nature of the nursing profession, attempts have been made over the past 2 decades to investigate the magnitude and implications of job burnout among nurses working in various departments (Laschinger, 2001; Jansen et al, 1996; McKnight & Glass, 1995; Leiter et al, 1998; Aiken et al, 2002; Brown et al 2002; Demir et al, 2003; Laposa et al, 2003; Burke, 2003; Janssen et al, 2004). Some of the factors that have been reported in these studies, to be associated with job burnout, are: individual characteristics, job satisfaction, organizational commitment, threats to job control, hardness of training, workload, interpersonal relationships with colleagues, knowledge of nursing, bureaucratic-political constraints, level of education, night shifts, being hospital-based, working on medical and surgical wards and negative work–home interference.

Mental health nurses are particularly vulnerable, due a lack of community support, low staffing levels, stigma and client pressures including the risk of violence. Since the prevalence of burnout amongst mental health nurses has reached as high as 59.2% in some settings, the need for intervention is important (Imai, Nakao, Tsuchiya, Kuroda & Katoh, 2004, p. 767).

Mental health nurses play a crucial role in the private health sector in Greece. (Malliarou et al, 2008). The need to study the factors that affect burnout among mental health nurses arises due to the specificity of this profession so as to the increased stress implications. In addition, the lack of research referring to job burnout in the private mental health sector constituted an additional motive to this research.

This research aims to determine the burnout levels of nurses employed in the private mental health sector in the region of Larissa, Greece and the relation of the

dimensions of burnout to personal characteristics and organizational factors so as to evaluate the respective contribution of each of these factors to the burnout levels. Organizational factors will consist of Job Satisfaction (JS), Organizational Commitment (OC) and the job stressors Role Conflict (RC) and Role Ambiguity (RA).

This dissertation is divided into two chapters. In the first chapter the literature review is presented where job burnout is conceptualized, its consequences and antecedents are discussed thoroughly, its connection to nursing and more specific to mental health nurses is presented so as the organizational factors and socio-demographic characteristics that will compose the subject of research. In the second chapter the design and methodology of the research, including procedures, sampling and instruments, are demonstrated so as the empirical study (statistical analysis) with its results followed by a discussion of findings.

Literature review

Burnout

Definition

Burnout can be defined as a psychological condition, resulting in mental or physical energy depletion caused by chronic unrelieved job-related stress and ineffective coping strategies (Edward & Hercelinskyj, 2007, p. 240; Robinson, Clements & Land, 2003, p. 34).

History of burnout research

Freudenberger, a psychiatrist working in an alternative health care agency, first used the term burnout in 1974 saying that it is the feeling of the failure and exhaustion that can be observed in social workers that worked in institutions and it was the result of immoderate requirements of energy, effort and qualifications (Freudenberger, 1974). The use of the term burnout for this phenomenon began to appear with some regularity in the 1970s in the United States, especially among people working in the human services. This popular usage was presaged by Greene's 1961 novel, *A Burn-Out Case*, in which a spiritually tormented and disillusioned

architect quits his job and withdraws into the African jungle. Even earlier writing, both fictional and nonfictional, described similar phenomena, including extreme fatigue and the loss of idealism and passion for one's job. What is noteworthy is that the importance of burnout as a social problem was identified by both practitioners and social commentators long before it became a focus of systematic study by researchers (Maslach et al, 2001).

The mainstream of burnout psychology does consider burnout to be work-related, which also makes it more differentiable from other related constructs, such as depression (Schaufeli & Taris, 2005). In order to clarify the work-relatedness, the terms 'job burnout', 'professional burnout', and 'occupational burnout' have been used (Ahola, 2007; Schaufeli, Maslach & Marek, 1993). Burnout is a major problem mainly in the helping professions such as nursing, medicine, social work, law enforcement and education (Hellesøy, 2000).

Stress theories

Burnout is considered as a chronic stress reaction and in practice, the roots of burnout theories are mainly in general stress theories, which emphasize the interaction between work characteristics and the employee (Schaufeli & Enzmann, 1998). On a general level, the working definition of burnout by Schaufeli and Enzmann (1998) also highlighted the role of the mismatch of intentions and reality at the job and inadequate coping strategies. These authors provided an integration model which focused on the role of coping in developing either 'positive gain' or 'negative loss spirals' (Schaufeli & Enzmann, 1998).

One of the most influential general theories has been the Person Environment – Fit Theory (PE-Fit theory) (French, Caplan & Van Harrison, 1982; Edwards, 1996), according to which, an imbalance between demands and opportunities in the working environment and skills and expectations of the employee is the most important antecedent of the process of stress and deteriorating health. The PE-Fit theory is, however, not very specific and does not take individual variables into consideration (Spielberger & Reheiser, 2005). Lazarus and Folkman (1984) added individual perception and evaluation of the situation and of one's possibilities to manage the situation into the theory, stressing its interactive nature.

Several other influential theories on specific working conditions as the core factors have been applied in burnout research. The most important theories used have been the Job Strain (or the Demand-Control) model (Karasek, 1979; Karasek & Theorell, 1990) and the Effort-Reward – Imbalance (ERI) model (Siegrist, 1996). According to the Job Strain model, a combination of high job demands and low job control increases the risk of a high-strain situation at work. Likewise, according to ERI, a combination of high effort and low rewards constitutes a threat to individual well-being (Peter & Siegrist, 1997; Siegrist, 1996).

According to Schaufeli and Enzmann (1998, p. 36), the following common elements can be found in most of the burnout theories: 1) predominance of fatigue symptoms, 2) various atypical symptoms occur, 3) symptoms are work-related, 4) symptoms manifest in normal persons without major psychopathology, and 5) decreased effectiveness and impaired work performance occurs because of negative attitudes and behaviors.

Three Dimensions of Burnout

In the 1980s the work on burnout shifted to more systematic empirical research. One of the pioneers in this field, Christina Maslach, published the first version of the Maslach Burnout Inventory with her colleague Susan Jackson in 1981 (Maslach & Jackson, 1981).

There was actually an underlying consensus about three core dimensions of the burnout experience, and subsequent research on this issue led to the development of a multidimensional theory of burnout (Maslach 1982, 1998). This theoretical framework continues to be the predominant one in the burnout field. Below, the three dimensions according to Maslach (1982, 1988) are presented.

Emotional exhaustion

Exhaustion is the central quality of burnout and the most obvious manifestation of this complex syndrome. When people describe themselves or others as experiencing burnout, they are most often referring to the experience of exhaustion. Of the three aspects of burnout, exhaustion is the most widely reported and the most thoroughly analyzed. The strong identification of exhaustion with burnout has led some to argue that the other two aspects of the syndrome are incidental or unnecessary (Shirom, 1989). However, the fact that exhaustion is a necessary criterion

for burnout does not mean it is sufficient. If one were to look at burnout out of context, and simply focus on the individual exhaustion component, one would lose sight of the phenomenon entirely.

Although exhaustion reflects the stress dimension of burnout, it fails to capture the critical aspects of the relationship people have with their work. Exhaustion is not something that is simply experienced—rather, it prompts actions to distance oneself emotionally and cognitively from one's work, presumably as a way to cope with the work overload. Within the human services, the emotional demands of the work can exhaust a service provider's capacity to be involved with, and responsive to, the needs of service recipients.

Depersonalization (cynicism)

Depersonalization is an attempt to put distance between oneself and service recipients by actively ignoring the qualities that make them unique and engaging people. Their demands are more manageable when they are considered impersonal objects of one's work. Outside of the human services, people use cognitive distancing by developing an indifference or cynical attitude when they are exhausted and discouraged. Distancing is such an immediate reaction to exhaustion that a strong relationship from exhaustion to cynicism (depersonalization) is found consistently in burnout research, across a wide range of organizational and occupational settings (Leiter & Maslach, 2000).

Personal accomplishment (inefficacy)

The relationship of inefficacy (reduced personal accomplishment) to the other two aspects of burnout is somewhat more complex. In some instances it appears to be a function, to some degree, of either exhaustion, cynicism, or a combination of the two (Byrne 1994, Lee & Ashforth, 1996). A work situation with chronic, overwhelming demands that contribute to exhaustion or cynicism is likely to erode one's sense of effectiveness. Further, exhaustion or depersonalization interferes with effectiveness. It is difficult to gain a sense of accomplishment when feeling exhausted or when helping people toward whom one is indifferent. However, in other job contexts, inefficacy appears to develop in parallel with the other two burnout aspects, rather than sequentially (Leiter, 1993). The lack of efficacy seems to arise more

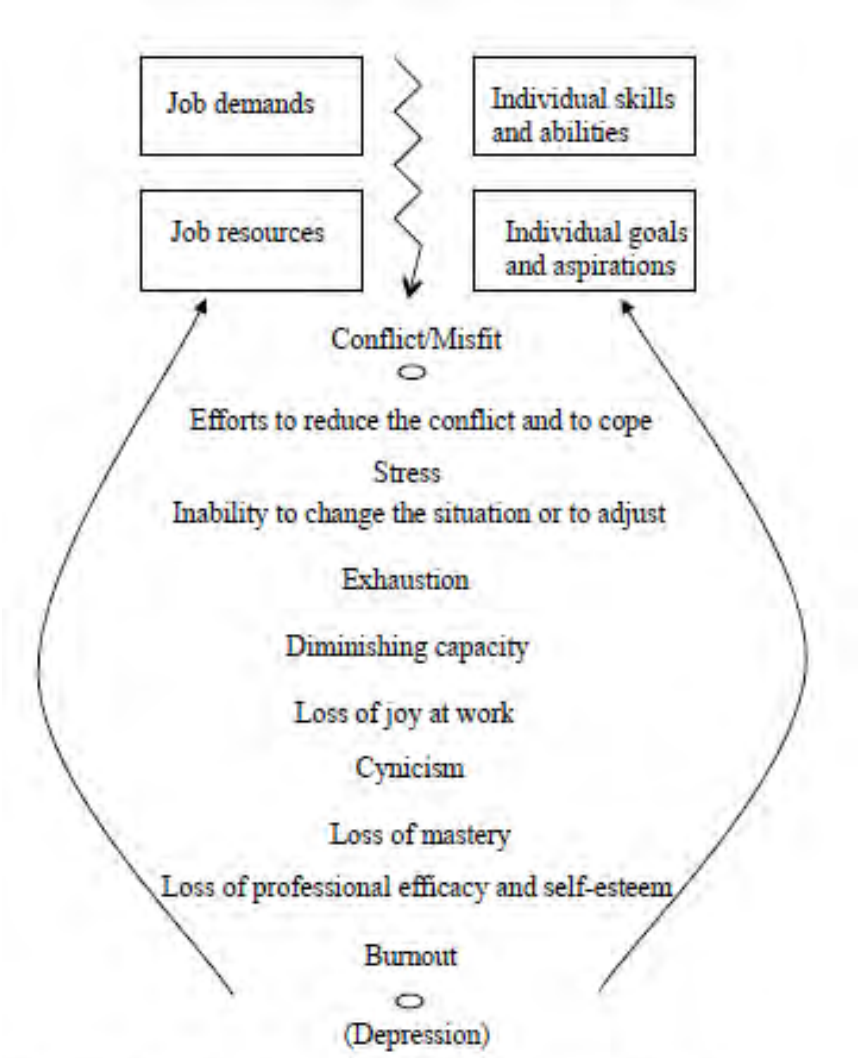
clearly from a lack of relevant resources, whereas exhaustion and cynicism emerge from the presence of work overload and social conflict.

Developmental Models

Once the three dimensions of the burnout syndrome had been identified, several developmental models were presented in these dimensional terms. The phase model proposed that each of the three dimensions be split into high and low scores, so that all possible combinations of the three dimensions resulted in eight patterns, or phases, of burnout (Golembiewski & Munzenrider, 1988).

In terms of development, one alternative was that depersonalization (cynicism) is the first phase of burnout, followed by inefficacy, and finally exhaustion. Another alternative was that the different dimensions developed simultaneously but independently, and thus could result in the eight different patterns. Research based on the phase model has established that the progression of phases from low to high burnout is correlated with worsening indices of both work and personal wellbeing.

Another model of the three dimensions hypothesized a different sequential progression over time, in which the occurrence of one dimension precipitates the development of another (process model). Stressing the interaction between man and work as the root cause of burnout also emphasizes the nature of burnout as a process rather than a state. The process model of burnout follows the theory of Maslach and others (1996), which is also based on the P-E-fit theory (Edwards, 1996) (Figure 1). According to this model, the process starts from the mismatch between the employee and his/her work, which it is assumed causes stress (Maslach & Goldberg, 1998; Maslach et al., 1996). If the stressful situation is not solved, adjustment is not possible, or the situation remains unchanged, this will then lead to burnout symptoms, beginning with exhaustion and diminished capacity, through cynicism, and eventually to loss of professional efficacy (Maslach, Jackson & Leiter, 1996). Finally, if not treated, burnout may lead to depression or other illness (Ahola & Hakanen, 2007; Greenglass & Burke, 1990; Hδtinen et al., 2009).



Process of burnout (from Kalimo & Toppinen, 1997).

New models of burnout

New models have been developed, some of which were based on the MBI and empirical evidence obtained by this measure, such as the process model, as it was presented above (Leiter, 1993), which has similarities with the job demands-resources model (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001b).

According to the job demands-resources model, job demands are primarily related to the exhaustion component of burnout, whereas (lack of) job resources are primarily related to disengagement, and lack of accomplishment is not included (Demerouti et al., 2001b).

Some of the other new influential theories are based on social exchange theories (Schaufeli, 2006) or the conservation of resources theory (Hobfoll & Freedy, 1993). The first focuses on social comparisons people make when they evaluate the work environment, such as fairness at work. The latter seems to be the most influential, especially in recent studies on job engagement, which was originally defined as the opposite of burnout (Maslach & Leiter, 1997; Schaufeli, Salanova, Gonzalez-Roma & Bakker, 2002).

Burnout outcomes

The significance of burnout, both for the individual and the workplace, lies in its links to important outcomes. Most of the outcomes that have been studied have been ones related to job performance. There has also been some attention paid to health outcomes, given that burnout is considered a stress phenomenon (Table 1).

As a result of burnout people develop negative self-concept and become detached, apathetic, angry or hostile in their work place (Maslach, Schaufeli & Leiter, 2001). Job burnout has cumulative effects on mental health, quality of life, family life and last but not least on productivity (Maslach & Leiter, 1997).

Job outcomes

Job burnout is being increasingly recognized as one of the most serious occupational health hazards with withdrawal, absenteeism, intention to leave the job, and actual turnover to be the most significant consequences (Greenglass & Burke, 2002). However, for people who stay on the job, burnout leads to lower productivity and effectiveness at work.

More specifically, sickness absenteeism is the most common outcome in studies investigating the consequences of stress and burnout on health (Smulders & Nijhuis, 1999). In a study of nurses, burnout was associated with more sick leaves and more reported absences for mental reasons (Parker & Kulik, 1995). Emotional exhaustion predicted the frequency of long absences (4 days or more) in hospitals (Firth & Britton, 1989) and absenteeism in the airline reservation service sector (in a computer-monitored work setting) (Saxton, Phillips & Blakeney, 1991). Burnout was prospectively associated with both self-reported sickness absence days and sickness absence spells in a Danish human service sector (Borritz et al., 2006).

Permanent work disability is a serious consequence of a disabling process preceded by illness or illnesses. The disability process is usually a long one, often related to an increasing duration of sickness absences and difficulties in returning to work following an illness (Dekkers-Sanchez, Hoving, Sluiter & Frings-Dresen, 2008; Virtanen, Vahtera & Pentti, 2007).

People who are experiencing burnout can have a negative impact on their colleagues, both by causing greater personal conflict and by disrupting job tasks. Thus, burnout can be "contagious" and perpetuate itself through informal interactions on the job. There is also some evidence that burnout has a negative "spillover" effect on people's home life (Burke & Greenglass 2001).

Table 1. Individual burnout symptoms.

Physical	**Psychological**	**Behavioral**
Physical exhaustion/fatigue	Rigidity to change/loss of flexibility	Low job performance/low job satisfaction
Depression	Loss of concern and feelings/apathy	Decreased communication/withdrawal
Insomnia or sleeping more than usual	Cynicism/negativism	High job turnover/leave position
Headaches	Emotional exhaustion/loss of	Increased absenteeism
Gastrointestinal problems/ulcers	emotional control	Loss of enthusiasm for job
Lingering colds/frequent colds/flu	Low morale/sense of futility	Increased drug use
Weight loss or gain	Loss of patience/irritable	Increased marital and family conflict
Shortness of breath	Inability to cope with unwanted	
Hypertension	stress	High alcohol use
High cholesterol	Feelings of anger/bitterness/resent	Lack of focus on job/lack of
Coronary disease	ment/disgust	purpose and priorities
Impaired speech	Boredom	
Sexual dysfunction	Reduced self-concept	Accident proneness
	Dehumanizing clientele/labeling	Increased complaints about job
	Loss of idealism/disillusion	Forgetfulness/poor concentration
	Frustration	
	Inability to make decisions	
	Feeling of powerlessness	
	Suspicion/paranoia	
	Guilt feelings/feelings of failure	
	Depression	
	Alienation	
	Increased worry	
	Over-confidence/taking unusually	
	high risks	
	Stagnation	
	Feelings of being everything to	
	everyone/omniscient	
	Loss of charisma	

Adapted from a compilation of research by Don Unger, "Superintendent Burnout: Myth or Reality" (Ph.D. dissertation, The Ohio State University, Columbus, 1980.)

Health outcomes

According to burnout theories burnout is assumed to lead to poor health and physiological illness (Maslach et al., 1996). The effects of burnout may be physiologically mediated through impairment of the immunological system (Mohren et al., 2003) or changes in health behaviour (Melamed, Shirom, Berliner & Shapira,

2006a) such as alcohol consumption (Ahola et al., 2006c) or impaired sleep (Grossi, Perski, Evengɛrd, Blomkvist & Orth-Gomır, 2003; Sonnenschein, 2007).

As a chronic stress syndrome, burnout may affect health physiologically by increasing allostatic load, which will then affect cognitive, autonomic, and neuroendocrine functioning. Allostasis refers to the active process by which the body responds to daily events and maintains homeostasis. Allostatic overload refers to a process where allostasis is chronically increased or dysregulated (McEwen, 2008). Allostatic overload represents a chronic situation leading to physical impairment and possibly illness.

Burnout has been shown to be associated with several cardiovascular risk factors, such as the metabolic syndrome, a change in levels of stress hormones, low-grade inflammation, blood coagulation and fibrinolysis (for a review, see Melamed et al., 2006a). Burnout has also been linked to several psychosocial antecedents of depressive disorders (Bonde, 2008; Netterstrφm et al., 2008; Stansfeld & Candy, 2006), cardiovascular disorders (Belkic, Landsbergis, Schnall & Baker, 2004; Eller et al., 2009; Kivimδki et al., 2006) and musculoskeletal disorders (Jaworek Marek, Karwowski, Andrzejczak & Genaidy, 2010). Previous studies showed that perceived stress may be related to hospital admissions (Macleod et al., 2002; Rosengren et al., 2004).

It is concluded that burnout causes physical and mental dysfunction, although data support the argument that burnout is itself a form of illness (Maslach et al., 2001). Either way the diagnostic strategy uses an independently established burnout diagnosis as an external criterion to establish cut-off points. For example, Schaufeli et al. (2001) used neurasthenia, as defined in the International Classification of Diseases (ICD-10, 1994) as the equivalent of severe burnout. According to the ICD-10, a neurasthenic diagnosis (code F43.8) requires: 1) persistent and increased fatigue or weakness after minimal (mental) effort, 2) at least two out of seven distress symptoms such as irritability and inability to relax, 3) the absence of other disorders such as mood disorder or anxiety disorder. According to Schaufeli et al. (2001), in order to be diagnosed as "burnout," the neurasthenic symptoms should additionally be work-related, and the individual should receive professional treatment.

Burnout antecedents

Burnout is an individual experience that is specific to the work context. Thus the research over the past 25 years has maintained a consistent focus on the situational factors that are the prime correlates of this phenomenon. On the other hand people do not simply respond to the work setting; rather, they bring unique qualities to the relationship. These personal factors include demographic variables (such as age or formal education), enduring personality characteristics, and work-related attitudes (Maslach et al., 2001).

Research on burnout indicates that the environment within which individuals find themselves, specifically the characteristics of the work environment, are more related to burnout than to personal and or personality factors (Leiter & Maslach, 1988; Maslach & Leiter, 1997).

Situational factors

Job characteristics

Quantitative so as qualitative job demands such as workload, time pressure, ever-changing expectations, new job requirements and role conflict, role ambiguity respectively, comprise some of the stressors which can cause job burnout syndrome (Constanti et al., 1997). Experienced workload and time pressure are strongly and consistently related to burnout, particularly the exhaustion dimension (Bakker, Demerouti & Verbeke, 2004). Role conflict occurs when conflicting demands at the job have to be met, whereas role ambiguity occurs when there is a lack of adequate information to do the job well.

In addition to studying the presence of job demands, burnout researchers have investigated the absence of job resources. Lack of resource factors at work is related to cynicism (and lack of professional efficacy (Demerouti, Bakker, Nachreiner & Ebbinghaus, 2002; Demerouti et al., 2001b; Janssen, Schaufeli & Houkes, 1999; Lee & Ashforth, 1996; Leiter, 1991, 1993; Taris et al., 1999). The resource that has been studied most extensively has been social support, and there is now a consistent and strong body of evidence that a lack of social support, especially from supervisors, is linked to burnout (Crotty, 1987). Another set of job resources has to do with information and control. A lack of feedback is consistently related to all three dimensions of burnout. Burnout is also higher for people who have little participation

in decision making and have less autonomy (Ahola & Hakanen, 2007; Ahola et al., 2005).

Organizational characteristics

Although job characteristics are of great importance for the prediction of burnout, organizational factors, especially in larger organization, such as hierarchies, operating rules, resources, space distribution and commitment can have a persistent influence, especially when fairness, equity and values are compromised (Maslach et al, 2001). As a result, the contextual focus has been broadened to include the organizational and management environment in which work occurs. This focus has highlighted the importance of the values implicit in organizational processes and structures.

To summarize, the basic idea of mismatch of the person and the work has been used as a starting point for defining six critical determinants of burnout (Leiter & Maslach, 1999; 2005a; 2005b; Maslach & Leiter, 1997). These six areas of mismatch at work, which are of crucial importance for the development of burnout, are: workload (quantitative or qualitative overload), control (e.g., role conflict, role ambiguity, and autonomy), reward (institutional, financial, or social), community (social support), fairness (fair and equitable work environment) and values (how individual and organizational values correspond).

Occupational characteristics

The differences in the burnout measures between different occupational groups seem to suggest that the similar structure of burnout can be found across occupations, but that there are differences in the level of burnout scores (Demerouti et al., 2002).

Burnout is being studied throughout the occupational sector as defined by the occupations' profiles on the three dimensions. In a research, a comparison was made of burnout profiles for five occupational sectors (teaching, social services, medicine, mental health, and law enforcement) in two countries (the United States and Holland), and the results revealed similar occupational profiles in both nations (Schaufeli & Enzmann 1998). Profiles of law enforcement (i.e. police officers and prison guards) were characterized by comparatively high levels of cynicism and inefficacy and low levels of exhaustion. Teaching was characterized by the highest level of exhaustion,

with both other dimensions close to the nation's average. Medicine in both countries was characterized by somewhat lower levels of exhaustion and cynicism, and by slightly higher levels of inefficacy. However, the profiles of workers in social services and mental health care differed by nation.

Burnout has been more often studied in white-collar jobs - a white-collar worker is a person who performs professional, managerial, or administrative work - , in which qualitative as well as quantitative work overload are assumed to lead to the development of exhaustion and other burnout symptoms. Burnout might also develop in blue-collar occupations - a blue-collar worker is a working class which may involve skilled or unskilled manufacturing, mining, sanitation, custodian work, oil field, construction, mechanical, maintenance, technical installation and many other types of physical work - , where it is caused by a high degree of monotony combined with low control, while in white-collar jobs the stressors usually deal with role problems, interpersonal conflicts, and a heavy workload (Winnubst, 1993) Also an effort-reward imbalance or job strain resulting from demand-control imbalance is most likely to occur in low-skilled service and manual jobs, where the most adverse working conditions and most adverse work related health outcomes can be found (Rydstedt, Devereux & Sverke, 2007). Blue-collar workers have traditionally had a greater exposure to risk factors, such as low paid, temporary, and insecure employment or shift-work.

Individual factors

Demographic characteristics

Age is consistently related to burnout (Lee & Ashforth, 1993b). Among younger employees the level of burnout is reported to be higher (Ahola et al., 2006c). The demographic variable of sex has not been a strong predictor of burnout (Maslach et al, 2001). With regard to marital status, those who are unmarried (especially men) seem to be more prone to burnout compared with those who are married. Singles seem to experience even higher burnout levels than those who are divorced (Maslach & Leiter, 1997). Some studies have found that those with a higher level of education report higher levels of burnout than less educated employees (Bakker et al, 2005).

Personality characteristics

There are a few reviews showing the relationship between personality and burnout (Alarcon, Eschleman & Bowling, 2009; Maslach et al., 2001; Schaufeli & Enzmann, 1998). Some of the evidence regarding the importance of personal factors compared to occupational factors as predictors of burnout is contradictory (Hakanen, 2004; Kalimo et al., 2003).

Several personality traits have been studied in an attempt to discover which types of people may be at greater risk for experiencing burnout such as low levels of hardiness, low self-esteem, an external locus of control and a passive and defensive way of coping with problems at work (Swider & Zimmerman, 2010).

It has been shown that burnout is linked to the dimension of neuroticism (Lindblom et al, 2006). Neuroticism includes trait anxiety, hostility, depression, self-consciousness, and vulnerability; neurotic individuals are emotionally unstable and prone to psychological distress. In the same study the exhaustion dimension of burnout also appears to be linked to Type-A behavior (competition, time pressured lifestyle, hostility, and an excessive need for control

Burnout in Nurses

It is reported that at the global level nurses face several challenges and are ranked 27th among 130 professionals requesting psychological counseling (Leiter & Maslach, 1988).

Nurses are 24-hour health service providers on the front line of contact with patients, and are essential to hospital operations. Nurses' occupational health is a major hospital management issue. When occupational health is discussed, stress is a critical field with which to deal. There have been many nursing stress studies (Estryn Behar et al., 1990; Tan, 1991; Tyler and Cushway, 1992) and nurses' workplace is particularly stressful because of the interpersonal service they provide to patients and the weight of responsibility associated with human life (ILO, 1993). Nurses working in hospitals have higher levels of mental health problems than the general population (Mori and Kageyama, 1995). A previous study whose subjects were 787 female nurses from three Japanese hospitals (response rate: 83.2 percent) reported more than 70 percent of nurses were moderately depressed using Zung's Self-rating Depression Scale (Nakao et al., 2006). Nurses are subject to general stressors such as heavy

workload, shift and other work difficulties, low use of specialized knowledge and skills, role conflict, role ambiguity, interpersonal problems, environmental hazards and low remuneration. Stressors specific to nursing including patient deaths, job responsibility, infection risks and conflicting doctors' instructions also come into play (Haratani, 1998). It has been suggested that continuous combination and build-up of poor work conditions such as overtime and inability to take regular consecutive days off, workplace dissatisfaction, desire to be transferred and other problems can lead to an extreme state of physical and mental fatigue (Sato and Amano, 2000).

Similar to other helping professions, the prevalence of burnout in nursing is particularly high, because of the high emotional and physical demands of this work (Greenglass et al, 2001; Leiter & Maslach, 1988). High burnout levels in nursing have been associated with heavy workloads (Laschinger et al, 2011), inadequate staffing levels (Aiken & Salmon, 1994; Garrett & McDaniel, 2001), job dissatisfaction (Aiken et al, 2002; Vahey et al, 2004; Zangaro & Soeken, 2004), absenteeism (Michie & Williams, 2003), and turnover (Fochsen et al, 2005; Koyner et al, 2007; Leiter & Maslach, 2009). In medicine, burnout has been linked to career dissatisfaction (Shanafelt et al, 2009) and career turnover (Becker et al, 2006). Supportive management has however been linked to lower levels of emotional exhaustion in health care work environments (Balogun et al, 2002). In the study of Malliarou et al (2008) it was found that burnout of nursing personnel was oscillated in mediocre levels. This discovery is also strengthened by previous researches that were made in General Greek hospitals (Adali et al, 2002; Asimakopoulou, 2004; Kandri et al, 2004). Stewart and Arklie, 1994 found out that nurses whose roles are not clearly defined and do jobs which are not their duty have higher levels of burnout.

Burnout in mental health nurses

Attempts have also been made to study the phenomenon of burnout among nurses working in mental health fields, yielding interesting findings. Stress can affect mental health nurses in a number of ways, including alcohol and other drug dependence, coronary artery disease, somatic complaints, attempted suicide and efficiency of nursing care provided (Tully, 2004, p. 43). It can also cause significant problems in relation to care provision in mental health care settings, as nurses

suffering from burnout may become cynical, lose respect or concern for their patients and have dehumanized perceptions of their patients (Barling, 2001, p. 248).

It is argued that psychiatric nurses face unique job challenges compared to their counterparts who work in non-psychiatric wards. The increasing number of mental health clients compared to the decreasing number of beds and qualified staff, means that mental health nurses are spending less time per patient and potentially providing a reduced level of care (De Carlo, 2001; Mental Health Council of Australia [MHCA], 2005, p. 2). In addition, mental health nurses are often confronted with caring for patients in inappropriate settings, with a reduced level of support and increased administrative pressures all leading to an increase in stress and burnout (Barling, 2001, p. 252; MHCA, 2005, p. 3). The mental health sector and its nursing staff are exposed to a unique range of workforce pressures, which are in addition to the pressures affecting the general health industry (MHCA, 2005, p. 2).

Cronin-Stubbs and Brophy's (1985) comparative study of psychiatric nurses and nurses working in theatres, intensive care and general medicine, using a random sample of 269 female nurses found that psychiatric nurses experienced intense interpersonal involvement and stated that frequent conflicts with patients, families, physicians and colleagues took place in their working environment. This study demonstrated that interpersonal relationships were the most frequent sources of undesirable personal stress for psychiatric nurses and that it had a greater impact on them than on nurses of other specialties. The authors suggested that psychiatric nurses were vulnerable to burnout because of less social support and less on–job and off–job affirmation compared with nurses from other specialties.

In studying 296 nurses working with medical units, critical units, operation rooms, and psychiatric units in different hospitals, Cronin-Stubbs and Rooks (1985) observed significant differences in the frequency and intensity of occupational stress and burnout among the subjects. Critical and medical nurses in this study encountered occupational stressors more frequently and intensely than psychiatric and operation room nurses. Stress in psychiatric nurses is further attributed to administrative and organizational factors. Fagin and co-workers (1996) attributed burnout among psychiatric nurses to staff shortages, health service changes, poor morale and not being notified of changes before they occurred.

A factor analysis of a survey of 332 staff members in another psychiatric hospital showed that job-related stressors clustered into two factors: lack of administration control, perceptions that treatment decisions were made by administrators with little input or communication from nursing staff, and practice-related stressors, stress that resulted from day-today duties (Corrigan, 1993).

On the contrary studies comparing mental health nurses with other group of nurses found that mental health nurses are less stressed than other specialties (Mansfield et al, 1989; Plant, 1992). However, most stressors identified are common to both mental health and general nurses, and stress seems to arise from the overall complexity of nurses' work, rather than specific tasks required within hospital settings (Dolan, 1987; Muscroft & Hicks, 1998; Yu et al, 1989).

Dolan (1987) identified significantly lower levels of burnout in psychiatric nurses compared with general nurses. She suggests that this is so because psychiatric nurses have the opportunity to express their opinion in a multidisciplinary team whereas general nurses have fewer opportunities to do this. Thus, this aspect of their work appears to protect mental health nurses from the levels of stress and burnout experienced by their general nursing counterparts. Dolan found that burnout was negatively correlated with job satisfaction. The negative influence of stress on job satisfaction has been noted also in a number of studies (Cushway et al, 1996; Hinshaw & Atwood, 1983; Lucas et al, 1993; Devereux, 1981).

In addition to Dolan's findings, Carson et al.'s (1999) study of 648 ward-based British nurses conclude that the single most important finding to emerge from the present study was the relatively low incidence of burnout in the large sample of mental health nurses surveyed. Only 5.7 percent of total sample could be described as being high burnout. They account for this finding by explaining that the vast majority of nurses were coping in their changing work environments. Kilfedder et al.'s (2001) study of 510 British psychiatric nurses found also low levels of burnout. Only 2.0% of the sample could be categorized as having high burnout overall.

Socio-demographic characteristics

Of all the demographic variables that have been studied, age is the one that has been most consistently related to burnout (Lee & Ashforth, 1993b). Among younger employees the level of burnout is reported to be higher than it is among those over 30 or 40 years old. Age is confounded with work experience, so burnout appears to be more of a risk earlier in one's career (Maslach & Leiter, 1997). However, these findings should be viewed with caution because those who burn out early in their careers are likely to quit their jobs, leaving behind the survivors who consequently exhibit lower levels of burnout (Maslach et al, 2001).

The demographic variable of sex has not been a strong predictor of burnout (despite some arguments that burnout is more of a female experience) (Ahola et al., 2006c). Some studies show higher burnout for women, some show higher scores for men, and others find no overall differences. The one small but consistent sex difference is that males often score higher on cynicism. There is also a tendency in some studies for women to score slightly higher on exhaustion (Lee & Ashforth, 1993b). These results could be related to gender role stereotypes, but they may also reflect the confounding of sex with occupation (e.g. police officers are more likely to be male; nurses are more likely to be female). Kantas (1995) states that the observed differences between men and women have to do with the socialization, rather than ''nature'' of gender. In the research of Preety, McCarthy και Catano (1992) though, it was demonstrated that men have higher levels of emotional exhaustion and depersonalization when they occupy administrative roles. As for the women, directly the opposite was concluded in the same research. Krausz et al (2000) hold the view that male nurses have poorer coping ability as compared to their female counterparts According to other researchers, women are more prone to burnout (Papantoniou, 2007).

With regard to marital status, those who are unmarried (especially men) seem to be more prone to burnout compared with those who are married (Yousefy & Ghassemi, 2006). Singles seem to experience even higher burnout levels than those who are divorced. As for ethnicity, very few studies have assessed this demographic variable, so it is not possible to summarize any empirical trends.

Some studies have found that those with a higher level of education report higher levels of burnout than less educated employees (Shaufeli & Enzmann, 1998). It is not clear how to interpret this finding, given that education is confounded with other variables, such as occupation and status. It is possible that people with higher education have jobs with greater responsibilities and higher stress. Or it may be that more highly educated people have higher expectations for their jobs, and are thus more distressed if these expectations are not realized.

Shift-working, including working nights, and increases in the length of time worked during the day, have been shown to be burnout factors both in the study of Malliarou et al (2008) and previous studies (Shimizu et al, 2005).

A study of Yousefy & Ghassemi (2006) showed a positive correlation between age and years of experience with EE. It is possible this observation is related to the very fact that with age one's tolerance for demanding situations and stressful work environment decreases. In the beginning of their career, nurses may be more motivated but in due time their eagerness to continue as an ordinary nurse may decline, as they do not see coherence between their needs and the stresses which they experience.

Job satisfaction

Conceptualization

Job satisfaction is important for how people feel in life. The extent to which people are satisfied with their work has been of enduring research interest. An increasing concern with the meaning of work and the belief that the degree of satisfaction at work is related to aspects of work behavior such as productivity, absenteeism, turnover rates and intention to quit, have prompted the growth of a vast research literature on job satisfaction (Locke, 1976; Nagy, 2002). If it is not possible to feel good about a job or to feel satisfied with some aspects of a job humans may re-evaluate their work position (Cowin, 2002).

Although job satisfaction has been viewed in a number of different ways, all definitions agree that it is a multidimensional concept (Koustelios, 1991; Locke, 1976; Rice et al., 1989; Shouksmith et al., 1990). Locke (1976, p. 1300) defined job satisfaction as "*a pleasurable or positive emotional state resulting from the appraisal*

of one's job or job experience". Smith et al. (1969, p. 6) suggested that, "job *satisfaction are feelings or affective responses to facets of the situation*". Dawis and Lofquist (1984) defined job satisfaction as the result of the worker's appraisal of the degree to which the work environment fulfills the individual's needs. Job satisfaction has been described as the degree of positive affective orientation toward a job (Happell et al, 2003; Blegen, 1993; Tovey and Adams, 1999). From a similar point of view it is considered as an individual's evaluation of how well the job meets the personal expectations and needs (Maslow, 1970; McKenna, 2000), or, with a global approach, as the employees' feelings and emotions towards their work experiences (Spector, 1997; Price, 2001). As Lease (1998) pointed out, these definitions are similar to others viewing satisfaction as the degree of an employee's affective orientation toward the work role occupied in the organization.

Taris and Feij (2001) describe two aspects of values: intrinsic and extrinsic. Intrinsic values refer to immaterial aspects of the job, such as job variety and autonomy, while extrinsic values refer to material work aspects, such as salary and opportunity for promotion. Job satisfaction increases when intrinsic work values are met (Taris and Feij, 2001; Hegney et al., 2006). Aspects often assessed in nursing are relationships with co-workers and supervisors, organizational factors, pay and work environment (Spector, 1997; Jackson and Corr, 2002).

Job satisfaction and burnout

Job satisfaction and burnout are both affective work responses. Prior studies examined the relationship between these two concepts. Their results showed a moderate to high association (Bhana and Haffejee, 1996; Dolan, 1987; Koeske and Kirk, 1994; Pines et al., 1980). However, the majority of these studies employed a univariate approach (Dolan, 1987; Pines et al., 1980). Many researchers have stressed the need to use multivariate techniques, instead of univariate, to study the complex social situations (Campbell and Taylor, 1996; Thompson, 2000). Multivariate procedures are warranting in the behavioral research because a better approximation of the reality of the human behavior can be achieved (Thompson, 2000).

A serious theoretical and practical problem of the job satisfaction and burnout literature is that it often approaches both concepts as if there were one-dimensional rather than discrete, although related, components. As a result, an overall measure of

job satisfaction and/or burnout was frequently used without examining the individual work conditions contributing both to satisfaction and burnout (Koeske and Kirk, 1994; Sarros and Sarros, 1987).

Despite the vast research activity, the nature and strength of the association between job satisfaction and burnout many issues still need to be addressed. A major concern is whether job satisfaction and burnout can be distinguished from each other.

Maslach and Schaufeli (1993) wondered at what point an association becomes so strong that both concepts are manifestations of the same underlying construct.

Based on previous research, Wolpin et al. (1991) similarly argued that job satisfaction and burnout although overlapping they are not identical dimensions. The study of Jayaratne et al. (1991) is among the few attempts to clarify the relationship between the two constructs. Their results showed that the distinction between job satisfaction and burnout was only moderately supported in a sample of protective services personnel. Similarly, the main finding of Tsigilis and Koustelios (2004) study was that job satisfaction and burnout are not identical constructs. In fact, their distinction was supported despite the high negative association.

These results represent an initial response to Maslach and Schaufeli (1993) and Maslach et al. (2001) question about the distinctiveness of the two constructs, taking into consideration their multidimensionality.

Job satisfaction has a special implication for previous health care service. Among health care staff it is usually lower as compared with other types of organizations (Glisson and Durick, 1988). Moreover, low levels of job satisfaction are related to nurses' high turnover and the nursing shortage (Murray, 2002; Tumulty et al., 1994). Job satisfaction and burnout among health care providers are important issues since they affect turnover rates, staff retention and ultimately the quality of patient care (Atencio et al, 2003; Lovgren et al, 2002; Kalliath and Morris, 2002).

Burnout is often cited as a source of job dissatisfaction in health care settings (Aiken, 2002; Shanafelt, 2009; Laschinger, 2012). In these work settings, emotional exhaustion and burnout have been linked to reduced job satisfaction (Burke & Greenglass, 1995; Moore, 2000) as well as to both actual and job turnover intentions (Moore, 2000; Thomas & Williams, 1995). In mental health care, burnout is also a strong predictor of both job and career satisfaction. Laschinger et al. (2009) found that

burnout was a significant predictor of Canadian nurses' job satisfaction, a finding corroborated by Piko (2006) in a study of Hungarian healthcare staff. Job turnover intentions, largely the result of job dissatisfaction, are alarmingly high for nurses in the first years of practice, ranging from 35 to 62%

On the other hand job dissatisfaction has often been construed as significant factor in the development of stress and burnout (Happell et al., 2003; Lee and Ashforth, 1993; Pines and Keinan, 2005). Specific studies of interest include the studies of Low et al. (2001) and Boles et al. (2000). The first was conducted among 148 salespeople, and found a significant negative relationship between job satisfaction and burnout. The latter was conducted among a sample of small business owners and a sample of educators, and found a strong correlation between job satisfaction and the emotional exhaustion dimension and weaker correlations between job satisfaction and the depersonalization and personal accomplishment dimensions.

Job dissatisfaction has thus been empirically identified as a significant work-related antecedent to burnout and as such will be studied in this research.

Organizational commitment

Definition

Be loyal to the company, and the company will be loyal to you (Mowday, Porter, & Steers, 1982). This phrase obviously understates the complexity involved in a person's attitude toward and behavior within his or her employing organization.

Porter (1974) defines organizational commitment as the relative strength of an individual's identification with and involvement in a particular organization. Similarly, according to Mowday, Steers and Porter's (1979) definition, organizational commitment entails three factors 1) a strong belief in and acceptance of the organization's goals and values 2) a willingness to exert considerable effort on behalf of the organization and 3) a strong desire to maintain membership in the organization. Zangaro (2001) emphasizes on the willingness of employees to continue their association with the organization and devote considerable effort to achieve organizational goals. Allen & Meyer (1990) defined organizational commitment as a psychological state that binds an employee to an organization, thereby reducing the incidence of turnover, and as a mindset that takes different forms and binds an

individual to a course of action that is of relevance to a particular target (Meyer & Herscovitch, 2001). Subsequently Meyer and Allen (1991) approached organizational commitment as reflecting three broad themes: Affective, Continuance, and Normative. Thus commitment is viewed as reflecting an affective orientation toward the organization, recognition of the costs associated with leaving the organization, and moral obligation to remain with the organization.

Conceptualization

Approaches to organizational commitment are conceptualized in a variety of ways. Stevens (1978) suggested that the different conceptions of organizational commitment can be subsumed in three categories, exchange approaches, attributions approaches and psychological approaches.

Exchange approach

According to Becker (1960) individuals are committed to the organization as far as they hold their positions and accumulate better benefits (or incur greater costs at departure). This may dissuade them from seeking alternative employment. Commitment is thus an outcome of inducement or contribution transactions between an organization and its members (Blau & Boal, 1987).

Attributions approach

This approach focuses on attitudes that result in the attribution of commitment. According to Johnston and Snizek (1991), these attributions are made in part in order to maintain consistency between one's behavior and attitudes. This is a moral approach in which the individual behavior is guided by emotions or heart.

Psychological approach

This approach relates to the process of identification and dedication of one's own energies to the organization's goals. An organization has to foster in its employees feelings of commitment to their work environment, commitment to the values and goals of the organization, commitment to one's occupation, to one's career and a strong work ethic (Cohen, 2000; Dalton & Tudor, 1993; Jaros, Jermier & Sincich, 1993; Steers & Porter, 1985). This approach conceptualizes commitment as an attitude or an orientation toward the organization that links the identity of the person to the organization.

Models of organizational commitment

The study of organizational commitment can be classified into various models. This classification of organizational commitment is either one-dimensional or multidimensional

O'Reilly and Chatman's model (1986)

They developed their multidimensional framework based on the assumption that commitment represents an attitude toward the organization, and that there are various mechanisms through which attitudes can develop. According to the researchers commitment takes on three forms.

Compliance: This occurs when attitudes and corresponding behaviors are adopted in order to gain specific rewards.

Identification: This occurs when an individual accepts influence to establish or maintain a satisfying relationship.

Internalization: This occurs when influence is accepted because the attitudes and behaviors an employee is being encouraged to adopt are congruent with existing values.

Morrow's major commitments

Morrow (1983) identifies five major commitments which have a reciprocal influence on each other. They are divided in two main groups. The first group examines commitments that influence work attitude with no relation to the organization in which the worker is employed. It includes commitments such as Protestant work ethic (Mirels & Garret, 1971), Career commitment (Greenhaus, 1971) and Job commitment (Blau & Boal, 1989). The second group includes commitments that are influenced directly by the organization in which the worker is employed, including both continuance and affective commitment (Allen & Meyer, 1991).

Etzioni's model

Etzioni's model encompasses three perspectives: Moral commitment, Calculative commitment and Alienative commitment.

Moral commitment

It represents one of two affective perspectives of organizational commitment. Moral commitment is characterized by the acceptance of identification with

organizational goals (Patchen, 1970). According to Hall (1970), it may be thought of as a kind of organizational identification.

Calculative commitment

It is based on the employee receiving inducements to match contributions. It may be thought of in the broader terms of an instrumental organizational attachment.

Alienative commitment

It represents an affective attachment to the organization. It is described by Etzioni (1961) as typical of a prison or military basic training camp in which a coercive compliance system is prevalent. Etzioni (1961) borrowed the word alienation from Karl Marx who defined it as a lack of control which is perceived inability to change or control the organization in this context. The employee's perceived sense of randomness provides the sense of loss of control. An employee who is alienatively committed to the organization may stay because of lack of alternatives or fear of serious financial loss.

Meyer and Allen's three-component model

Meyer and Allen made the biggest contribution to the organizational commitment research, with over fifteen studies published from 1984. It has undergone the most extensive empirical evaluation to date (Allen & Meyer, 1984). Common to all conceptualizations of commitment from the existing literature, they argued the belief that commitment binds an individual to an organization and thereby reduce the likelihood of turnover. The mindset of the model reflects three distinguishable themes: Affective attachment to the organization, named Affective commitment, perceived cost of leaving, named Continuance commitment and obligation to remain at the organization, named Normative commitment (Allen & Meyer, 1990).

Meyer and Allen (1991, p. 67) noted that organizational commitment is viewed as a psychological state that a) characterizes the relationship with the organization, and b) has implication for the decision to continue membership with the organization.

Affective commitment (affective attachment)

It is the employee's emotional attachment to, identification with, and involvement in the organization. Members who are affectively committed to the

organization continue to work for the organization because they want to (Meyer & Allen, 1991). Members who are committed on an affective way stay with the organization because they view their personal employment relationship as congruent to the goals and values of the organization (Beck & Wilson, 2000). Gould (1979) observed that some employees put effort into their work beyond what appears to be instrumentally required for the expected reward, and attributed this to the affective component of organizational commitment.

Meyer and Allen (1997) further indicate that affective commitment is influenced by factors such as job challenge, role clarity, goal clarity and goal difficulty, receptiveness by management, peer cohesion, equity, personal importance, feedback, participation and dependability.

Continuance commitment (Perceived costs)

Meyer and Allen (1997, p. 11) define continuance commitment as ‘*’awareness of the costs associated with leaving the organization*’’. It is calculative in nature because of the individual’s perception of weighing of costs and risks associated with leaving the current organization (Meyer & Allen, 1997). Employees whose link to the organization is continuance commitment remain because they need to do so.

Continuance commitment can be regarded as an instrumental attachment to the organization, where the individual associates with the organization on a base of assessment of economic benefits gained (Beck & Wilson, 2000). Here is a difference to affective commitment wherein individuals stay in the organization because they want to, and they identify with the organization and its values.

Normative commitment (obligation)

It is defined as a feeling of obligation to continue employment. Internalized normative beliefs of duty and obligation make individuals obliged to sustain membership in the organization (Allen & Meyer, 1990). The reciprocal obligation is based on the social exchange theory, which suggests that a person receiving a benefit is under a strong normative obligation or rule to repay the benefit in some way no matter the satisfaction level (McDonald & Makin, 2000).

What differentiates the various dimensions of commitment in the multidimensional conceptualization is the nature of the underlying mindset. Meyer

and Allen (1991) argued that affective, continuance and normative commitment are components of organizational commitment, rather than types because the employee-employer relationship reflects varying degrees of all three.

Organizational commitment and burnout

Employee burnout and commitment continue to be a significant topic of interest for researchers of organizational behavior and human resource management (Corrigan, Holmes, Luchins, Buican, 1994; Leiter, 1991). Though prior research indicates that antecedents and outcomes of organizational commitment are similar to those of job burnout, empirical research examining the relationship between the two is lacking.

One study that examined the impact of stress on individuals with varying degrees of commitment (Mathieu and Zajac, 1990) found that individuals who have a high degree of commitment to their organizations experience greater amounts of stress than those who are less committed.

Kobasa (1982) argued that organizational commitment protects the individual from negative outcomes experienced at work. Moreover, other researchers (Tan and Akhtar, 1998) noted that normative commitment had a significant positive effect on burnout, whereas affective commitment had no significant impact.

A study performed by Gemlik et al (2010) in the health sector staff (1957 participants) of two Medicine Faculty Hospitals in Istanbul indicated a relationship between burnout and the organizational commitment and more specific a linear relationship between emotional exhaustion and affective and normative commitment. In addition, it is found that a decrease in personal accomplishment causes an increase in continuance commitment. Another finding of this study is that when depersonalization increases affective commitment, normative commitment increases too.

It is considered that quality issues, right service, efficiency, and effectiveness in the health sector make the issues of burnout and organizational commitment in mental health nurses more important in today's organizational environment (Gemlik et al., 2010). All of the three aspects of Meyer & Allen's model will be studied in this research.

Job stressors: role conflict & role ambiguity

Definition

Role conflict occurs when an employee receives two different, conflicting sets of directions from two different authority figures in a work setting.

Role ambiguity, occurs when an employee is unclear on how to perform and/or behave in their particular job capacity (Rizzo et al., 1970; Behrman and Perreault, 1984).

Coneptualization

Since the 1950s there has been a significant body of literature and research on role theory, especially the constructs of role ambiguity and role conflict (e.g., Gross, Mason, & McEachern, 1958; Kahn, Wolfe, Quinn, Snoek, & Rosenthal, 1964; Neiman & Hughes, 1951; Rizzo, House, & Lirtzman, 1970).

Biddle and Thomas (1966) described a role as a set of prescriptions that define what the behavior related to a position should entail. Biddle (1979) defined role theory as the study of behaviors that are characteristic of persons within certain contexts. Various experiences and processes that presumably produce, explain, or are affected by those behaviors are also identified as part of role theory (Biddle, 1979). The author also suggested that the expectations involved with having various roles increase role complexity. Kahn et al. (1964) further purported that the existence of multiple roles increases role conflict.

Role stress is defined as a social structural condition in which role obligations are vague, irritating, difficult, conflicting, or impossible to meet (Hardy & Hardy, 1988). Role strain is the subjective state of emotional arousal demonstrated when the external conditions of role stress are experienced (Hardy & Hardy, 1988). Role conflict and role ambiguity are constructs within the broader concept of role strain, as described by role theory, that are used in role research due to the ability to empirically measure them (Crossley, 1993).

Kahn, Wolfe, Quinn, and Snoek (1964) identified anxiety, increased tension, dissatisfaction and frustration as responses to role strain exhibited as a result of role

stress. According to Kahn et al., role theory states that an individual experiences stress and performs poorly when the behaviors of the individual are inconsistent, incompatible or unclear. This role stress can be exhibited as either type of role stain, role conflict or role ambiguity (Crossley, 1993).

Role stress topic has gained huge attention on several organizational researches, mainly about role conflict and role ambiguity. Role conflict can be reduced if a professional does not involve in the administrative or bureaucratic control, since it can limit the activities that are directed to control him himself (Abernethy and Stoelwinder, 1995). Based on Luthan (1997), an individual will experience role conflict if he/she gets two or more pressures in one time then he tries to obey one of the pressure. Role conflict will occur of an employee or a professional when he feels a hardship to adjust the two roles that he is facing. One role, as the organization's member, he must be responsible for the organizational bureaucracy; while the other role, as a professional, he must be responsible for his profession or his job. Moreover, it was said the high role conflict and role ambiguity would reduce job satisfaction as the leader was failed to conduct the norm and ethical code of profession in the organization's activities (Coverman, 1989; Ruyteret.al. 2001; Koustelioset.al., 2004; Tand and Chang, 2010). Role conflict occurs because of the activity process contradicts to the norm and value system applied in an organization (Coverman, 1989; Ruyter et al., 2001).

Role conflict, role ambiguity and burnout

A great deal of research has examined the effect that role conflict has on emotional exhaustion (Schwab and Iwanicki, 1982; Singh et al., 1994). Boles et al. (1997) found that a direct, positive relationship exists between role conflict and emotional exhaustion. Elloy et al. (2001) found the same result in their investigation of self-managed work teams. The relationship was also found in nurses (Gil-Monte et al., 1993)

In their exploratory study Barber and Iwai (1996) asked 75 members of staff caring for people with dementia to complete questionnaires measuring staff characteristics, workload and care giving involvement, work environment characteristics and social support. Role conflict and role ambiguity were the best predictors of burnout. Thomsen, Soares, Nolan, Dallender and Arnetz (1999) in their

cross-sectional study of 1051 psychiatrists and mental health nurses, reported that organizational characteristics were more important than personal characteristics in predicting exhaustion.

Alarcon and colleagues (2004) in their investigation of burnout in general hospital nurses, found a positive association between work characteristics and burnout.

Adali and colleagues (2003) reported a positive relationship between burnout in psychiatric nurses and work environment characteristics.

In the study of Piko (2006) among Hungarian health care staff (n=201) the interrelationships among burnout, role conflict and job satisfaction were investigated. Role conflict was a factor contributing positively to emotional exhaustion and depersonalization scores.

A meta-analysis of correlations revealed that burnout among psychiatric nurses was negatively associated with job satisfaction, staff support and involvement with the organization and positively associated with role conflict (Melchior et al, 1997).

Role conflict and role ambiguity are important to be investigated deeper since it affect mental health nurse stress state and in that way performance.

Research model

As a framework in this study the research model of Mouton and Marais (1994) will be used. This model aims to incorporate the five dimensions of social sciences research, namely sociological, ontological, teleological, epistemological and methodological dimensions to systematize them within the framework of research process. The authors describe social sciences research as a collaborative human activity in which social reality is studied objectively with the aim of gaining a valid understanding of it. The model is described as a systems theoretical model with three sub systems, namely intellectual, market of intellectual resources and the research process, which interrelate with each other and with the research domain of Industrial Psychology in this dissertation.

Research design

Research variables

The dependant variables in this study are the three dimensions of burnout, namely emotional exhaustion, depersonalization and personal accomplishment. The independent variables are the dimensions of job satisfaction (personal satisfaction, satisfaction with workload, professional support, training, pay, standards of care and prospects), the dimensions of organizational commitment (affective, continuance, normative), role conflict, role ambiguity and socio-demographic characteristics such as age, marital status, education, years of experience, work role, number of children and kind of shifts.

Type of research

A quantitative research approach will be applied in this study. The particular approach was selected because quantitative methods are the more appropriate for researches like the present one and do not present as many limitations as the qualitative ones when testing hypothesis (Saunders et al., 2007).

The study is cross sectional, descriptive and explanatory in nature. Christensen (1997) indicates that the primary characteristic of the descriptive research approach is that it represents an attempt to provide an accurate description or picture of a particular situation or phenomenon. According to Mouton and Marais (1994), explanatory research goes further than merely indicating the existence of relationships between variables; it indicates the direction of relationship in a causal relation model. In this study job satisfaction and organizational commitment are hypothesized to have a negative impact on burnout while role conflict and role ambiguity a positive one.

Reliability

According to Christensen (1997), reliability refers to consistency or stability. Reliability in the literature review is been ensured by using existing literature sources, theories and models.

In the empirical study, all research participants are given the same instructions. The questionnaire is self-administered and is delivered by hand (researcher) to hand to each nurse. After the completion of questionnaires the chief nurse of each clinic gathers the material and gives it back to the researcher. In each

questionnaire the purpose of the study, the nature of scales, the number of questions, how long it takes to complete are explained. It is assured to the participants that the process is anonymous and confidential.

The method used so as to assure internal reliability and consistency is Cronbach's Alpha (Cronbach, 1960). The value of this internal consistency coefficient must be over 0.7, as Nunnally (1967) suggests in order having reliable results.

Population and sample

The research is conducted in the Greek health care sector and particularly in the private mental health hospitals in the city of Larissa. Psychiatric nurses from the public sector are excluded due to small population (=14), differences in organizational factors and the need of homogeneity. The population of the study is 318 full-time mental health nurses from all five private psychiatric clinics in Larisa: ''Ippokrateio'', ''Agia Fotini'', ''Ntinas'', ''Thomas'', ''H geitonia mas''. Unfortunately the director of one of the clinics did not cooperate and, as a result, the sample consisted of 232 mental health nurses from the rest four clinics. The returned questionnaires were 93, 15 of which were not included in the study (cut off point 5% of non-answered questions in each questionnaire). The active response rate is 33,6% which is low and this fact constitutes a limitation. According to Babbie's suggestion (1998) a 50% response rate is adequate and a 70% response rate is considered well.

The following descriptive statistics for the sample (N=78) provide a profile of the respondents (Appendix II)

Table 2 illustrates the high prevalence of women in the sample (71.8% females vs. 28.2% males). This is rational as nursing is mainly a female occupation. The number of males though, is fairly accountable and comparisons between the two categories are possible.

Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	22	28,2	28,2	28,2
	Female	56	71,8	71,8	100,0
	Total	78	100,0	100,0	

Table 2 : Frequency distribution: gender

Table 3 illustrates that there is a spread in terms of age in the sample, ranging from 21-25 to >45. Most individuals fall within the age categories 26-30, 36-40 and 41-45 (28.2%, 20.5% & 17.9% respectively). The category with the lowest number of individuals is the >45 years old (9%). The sample mainly consists of individuals in their productive age.

Age categories

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	21-25	10	12,8	12,8	12,8
	26-30	22	28,2	28,2	41,0
	31-35	16	20,5	20,5	61,5
	36-40	14	17,9	17,9	79,5
	41-45	9	11,5	11,5	91,0
	>45	7	9,0	9,0	100,0
	Total	78	100,0	100,0	

Table 3 : Frequency distribution : age

Table 4 illustrates that the highest number of nurses 3% Single represent the minority with 29.5%. Divorced and widowed nurses together account for 10.2% of the sample.

Marital status

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Married	47	60,3	60,3	60,3
	Single	23	29,5	29,5	89,7
	Divorced	5	6,4	6,4	96,2
	Widowed	3	3,8	3,8	100,0
	Total	78	100,0	100,0	

Table 4: Frequency distribution: marital status

In table 5 it is obvious that nurses with children are the majority in the sample (61.5%) while the no children category accounts for 38.5%. It is observed that most of the married nurses have children.

Number of children

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No children	30	38,5	38,5	38,5
	One	10	12,8	12,8	51,3
	Two	25	32,1	32,1	83,3
	Three	10	12,8	12,8	96,2
	Four or more	3	3,8	3,8	100,0
	Total	78	100,0	100,0	

Table 5: Frequency distribution: number of children

As for education level (Table 6), it is important to note that the schools which last 2 years (IEK, 2 years school) account for 71.8% of the sample while 4 years schools (TEI, AEI), which represent a higher education level, account for 28.2%. Nurses from AEI and TEI, usually, occupy administrative positions (head nurse, chief nurse) but are more expensive to the organization.

Education

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	TEI	20	25,6	25,6	25,6
	AEI	2	2,6	2,6	28,2
	IEK	9	11,5	11,5	39,7
	2 years school	47	60,3	60,3	100,0
	Total	78	100,0	100,0	

Table 6: Frequency distribution: education

Table 7 illustrates that administrative positions account for 17.9% (chief nurse 5.1% and head nurse for 12.8%). Blue collar workers, that is nurses and nurse assistants account for 28.2% and 53.8% respectively, showing that the nursing practice in these clinics is based on mostly nurse assistants (low paid, hard working, risk taking).

Work role

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Chief nurse	4	5,1	5,1	5,1
	Head nurse	10	12,8	12,8	17,9
	Nurse	22	28,2	28,2	46,2
	Nurse assistant	42	53,8	53,8	100,0
	Total	78	100,0	100,0	

Table 7: Frequency distribution: work role

In table 8 it is clear that most of the nurses are quite experienced with over 3 years of experience accounting for 89.7% of the sample. The category that prevails is 3-7 years with 39.7%, while the second prevailing category is 7-12 years with 29.5%. The new nurses represent the lowest percentage in the sample (2.6%).

Nursing experience (years)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	<1	2	2,6	2,6	2,6
	1-3	4	5,1	5,1	7,7
	3-7	31	39,7	39,7	47,4
	7-12	23	29,5	29,5	76,9
	12-17	12	15,4	15,4	92,3
	>17	6	7,7	7,7	100,0
	Total	78	100,0	100,0	

Table 8: Frequency distribution: years of nursing experience

Table 9 illustrates that the highest number of nurses in the sample fall within the 3-5 years category. Generally speaking, nurses seem to be loyal when looking at

the length of time they have been employed in the current clinic, with 55.1% having worked in the organization for more than 5 years.

Years in current clinic

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	<1 year	2	2,6	2,6	2,6
	1-3 years	7	9,0	9,0	11,5
	3-5 years	26	33,3	33,3	44,9
	5-7 years	13	16,7	16,7	61,5
	7-9 years	10	12,8	12,8	74,4
	>9 years	20	25,6	25,6	100,0
	Total	78	100,0	100,0	

Table 9: Frequency distribution: years in current clinic

Table 10 illustrates that most of the nurses' work also on night shifts (74.4%), while 25.6% work day only (morning or evening).

Kind of shifts

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Day only	20	25,6	25,6	25,6
	Day and night	58	74,4	74,4	100,0
	Total	78	100,0	100,0	

Table 10: Frequency distribution: kind of shifts

Table 11 shows that there is a quite high amount of nurses coping with a serious family issue at the time of the survey was taking place (24.4%), while 75.6% declared that there is no serious issue in their families.

Serious family issue at the time being

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	59	75,6	75,6	75,6
	Yes	19	24,4	24,4	100,0
	Total	78	100,0	100,0	

Table 11: Frequency distribution: serious family issue

Finally, tables 12, 13, 14, according to Maslach (1996) (Table 15), illustrate that there is a high level of emotional exhaustion reaching 53.8%, while depersonalization and personal accomplishment high levels account for 24.4% and 25.6% respectively (in this research scores of personal accomplishment are reversed, so as higher scores indicate higher burnout). Although emotional exhaustion levels are quite high, total burnout high level (high levels in all three dimensions) is 10.3% of the total sample (n=8).

Categorisation of emotional exhaustion

Burnout		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Low	23	29,5	29,5	29,5
	Medium	13	16,7	16,7	46,2
	High	42	53,8	53,8	100,0
	Total	78	100,0	100,0	

Table 12: Levels of emotional exhaustion

Categories of depersonalization

Burnout		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Low	40	51,3	51,3	51,3
	Medium	19	24,4	24,4	75,6
	High	19	24,4	24,4	100,0
	Total	78	100,0	100,0	

Table 13: Levels of depersonalization

Categories of personal accomplishment

Burnout		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Low	40	51,3	51,3	51,3
	Medium	18	23,1	23,1	74,4
	High	20	25,6	25,6	100,0
	Total	78	100,0	100,0	

Table 14: Levels of personal accomplishment

Categorization	High burnout	Medium burnout	Low burnout
Emotional exhaustion	**≥27**	**17-26**	**≤16**
Depersonalization	**≥13**	**7-12**	**≤6**
Personal accomplishment	**≤31**	**32-38**	**≥39**

Table 15: Categorization of Burnout (Maslach, 1996)

Procedure

At first, every possible documentary secondary data to which the author had access were examined. Sources were books, scientific journals, articles and websites.

After the design of the study, the questionnaire was constructed and delivered to the participants themselves in two days time after an admission by its clinic's director was granted. Twenty days later the chief nurses of each clinic who had already gathered the completed questionnaires handed them back to the researcher.

Primary data were generated by the survey with the use of the anonymous, self-administered, structured questionnaires.

The Statistical Package for the Social Sciences, SPSS 21.0 was used for the statistical analysis of the primary data.

Measuring instruments

The questionnaire is divided in five parts and takes approximately 25-35 minutes to fulfill (Appendix I):

Socio-demographic characteristics. Close ended statements referring to sex, age, marital status, number of children, education, work experience, years of nursing experience, years in the current clinic, kind of shifts and serious family issue are included in the 1st part.

Job satisfaction. The Measure of Job Satisfaction (MJS) (Traynor and Wade, 1993) is a multidimensional instrument designed for use in the nurse sector. It has 43 items in which 7 subscales are formed (personal satisfaction, satisfaction with workload, professional support, training, pay, prospects and standards of care). The stem question is 'how satisfied are you with this aspect of your job?' Respondents are asked to rate their degree of job satisfaction on a seven-point Likert scale, ranging from 'strongly disagree' to 'strongly agree'. All items begin with the phrase ''I am satisfied with''. This instrument has proved to provide high validity and reliability (Saane et al., 2003).

Burnout. The Maslach Burnout Inventory (Maslach, and Jackson, 1986) consists of 22 items. Emotional exhaustion is measured by nine items, depersonalization by five items, and personal accomplishment by eight items. All items have a 7-point response scale ranging from 0 - 'never experienced such a feeling' to 6 - 'experienced such feelings every day'. Scores on emotional exhaustion and depersonalization increase as burnout increases, while scores on personal accomplishment are negatively related to burnout (Maslach and Jackson, 1986). The MBI has been used in several studies in which it has been proven valid and reliable (e.g. Schaufeli and Van Dierendonck, 1993; Schaufeli and Janczur, 1994; Gemlik et al., 2010).

Organizational commitment. Allen and Meyer's (1997) Organizational Commitment revised scale (18 items) is used to measure all 3 dimensions (6 items each) of OC: affective (AC), continuance (CC), and normative (NC). Responses will be arrayed on a 7-point Likert (1 = strongly disagree, 7 = strongly agree). The use of this instrument by studies in different cultures make this instrument reliable and valid with internal consistencies of the dimensions varying between 0.85 for affective, 0.79 for continuance and 0.73 for normative (Gemlik et al., 2010; Noor Harun Abdul Karim and Noor Hasrul Nizan Mohammd, 2006; Ko et al., 1997).

Role conflict and role ambiguity. Role Conflict Scale consists of eight positively worded items and Role Ambiguity Scale of six negatively worded items (Rizzo et al., 1970) Examples of items are: 'I often work on unnecessary things', and 'I often have to buck a rule or policy in order to carry out an assignment'. Respondents are asked to rate each item, on a 7-point scale (1-7), indicating the degree to which the condition exists for them, ranging from ''totally false'' to ''totally true''. The validity and reliability of the two scales has been indicated by Murphy and Gable (1988) so as Kelloway and Barling (1990).

Hypotheses

Based upon literature and according to the objectives of this study the following hypotheses are formed:

H1 *There is a difference of burnout dimensions between males and females* (Appendix III)

H2 *There is a difference of burnout dimensions between age categories* (Appendix IV)

H3 *There is a difference of burnout dimensions between marital status groups* (Appendix V)

H4 *There is a difference of burnout dimensions between different number of children groups* (Appendix VI)

H5 *There is a difference of burnout dimensions in different education levels* (Appendix VII)

H6 *There is a difference of burnout dimensions between work roles* (Appendix VIII)

H7 *There is a difference of burnout dimensions indifferent categories of nursing experience (years)* (Appendix IX)

H8 *There is a difference of burnout dimensions in different categories of years in current clinic* (Appendix X)

H9 *There is a difference of burnout dimensions in different shift* groups (Appendix XI)

H10 *There is a difference of burnout dimensions between groups with and without serious family issue* (Appendix XII)

H11 *Emotional exhaustion will be positively related to Depersonalization*

H12 *Emotional exhaustion will be positively related to Personal accomplishment*

H13 *Depersonalization will be positively related to Personal accomplishment*

H14 *Burnout will be positively related to Role Conflict*

H15 *Burnout will be positively related to Role Ambiguity*

H16 *Burnout will be negatively related to Organizational Commitment dimensions*

H17 *Burnout will be negatively related to Job Satisfaction dimensions*

Methods used in statistical analysis

In order to analyze the available data emerged from the received questionnaires the author used the SPSS 21.0 (Statistical Package for Social Sciences). Initially the method used so as to assure internal reliability and consistency, was Cronbach's Alpha (Cronbach, 1960) (Table 16). Frequencies give information about the socio-demographic characteristics. Independent samples tests, ANOVAs and correlations (Pearson's & Spearman's), bivariate and partials, compose the methods with which the relations between the dependent (burnout) and independent variables will be examined. Level of significance is $p<0.05$. At last multiple regression analysis is used in order to create a predictive model for the each burnout dimension.

Variables	α values
Emotional exhaustion	0,832
Depersonalization	0,756
Personal accomplishment	0,722
Personal satisfaction	0,765
Satisfaction with workload,	0,698
Satisfaction with professional support	0,678
Satisfaction with training	0,789
Satisfaction with pay	0,758
Satisfaction with prospects	0,765
Satisfaction with standards of care	0,808
Affective commitment	0,822
Continuance commitment	0,750
Normative commitment	0,720
Role conflict	0,865
Role ambiguity	0,788

Table 16 Cronbach's α values

Results

In this section the results of the statistical analysis are reported, interpreted and analyzed. Here, all the research hypotheses will be investigated. Averages of all scores are used in the equations. In this research scores of personal accomplishment are reversed, so as higher scores indicate higher burnout. According to existence of normality or not parametric and non parametric tests were chosen (level of significance $p<0.05$). Descriptive statistics of all the organizational factors are presented in table 17.

Table 17: Descriptive Statistics

	N	Range	Minimum	Maximum	Sum	Mean		Std. Deviation	Variance	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Age	78	33	21	54	2654	34,03	,890	7,857	61,740	,507	,272	-,389	,538
Emotional exhaustion average	78	5,78	,22	6,00	233,09	2,9883	,17526	1,54786	2,396	,049	,272	-1,095	,538
Depersonalization average	78	4,80	,00	4,80	125,40	1,6077	,15542	1,37262	1,884	,644	,272	-,811	,538
Personal accomplishment reversed average	78	5,13	,00	5,13	104,13	1,3349	,12567	1,10993	1,232	,871	,272	,664	,538
Total burnout average	78	4,45	,09	4,55	161,73	2,0734	,13077	1,15491	1,334	,223	,272	-,723	,538
Affective commitment average	78	5,00	2,00	7,00	354,20	4,5410	,13294	1,17408	1,378	-,094	,272	-,630	,538
Continuance commitment average	78	5,33	1,67	7,00	381,48	4,8908	,13325	1,17680	1,385	-,271	,272	-,482	,538
Normative commitment	78	5,66	1,17	6,83	329,67	4,2265	,13541	1,19592	1,430	,228	,272	-,103	,538
Total organisational commitment	78	4,11	2,67	6,78	355,17	4,5534	,11024	,97360	,948	,103	,272	-,572	,538
Role conflict average	78	5,88	1,00	6,88	307,41	3,9412	,16275	1,43736	2,066	,026	,272	-,711	,538
Role ambiguity average	78	5,17	1,00	6,17	236,91	3,0373	,12380	1,09334	1,195	,911	,272	1,093	,538
Personal satisfaction average	78	5,22	1,67	6,89	338,07	4,3342	,16120	1,42368	2,027	-,039	,272	-,989	,538
Satisfaction with workload average	78	5,00	1,75	6,75	324,65	4,1622	,13707	1,21060	1,466	,206	,272	-,735	,538
Satisfaction with professional support average	78	4,87	1,38	6,25	324,28	4,1574	,12728	1,12408	1,264	-,007	,272	-,730	,538
Satisfaction with training average	78	6,00	1,00	7,00	266,60	3,4179	,14821	1,30898	1,713	,298	,272	-,144	,538
Satisfaction with pay average	78	5,00	1,00	6,00	222,75	2,8558	,17742	1,56697	2,455	,386	,272	-1,010	,538
Satisfaction with standards of care average	78	5,00	1,00	6,00	297,28	3,8113	,13740	1,21351	1,473	-,057	,272	-,561	,538
Satisfaction with prospects average	78	5,50	1,50	7,00	371,65	4,7647	,13856	1,22370	1,497	-,516	,272	,048	,538
Overall job satisfaction average	78	3,70	2,28	5,98	312,96	4,0123	,11176	,98703	,974	,187	,272	-,812	,538
Valid N (listwise)	78												

H1 *There is a difference of burnout dimensions between males and females* (Appendix III)

In order to test this hypothesis an independent samples t-test or Mann-Whitney U test (depending on normality) is conducted and the mean scores of different gender groups on the three dimensions of burnout were computerized.

The mean of emotional exhaustion in the male group is 3.39 while in the female group the mean is 2.83. It seems that the emotional exhaustion process is prevailing in males but that result is not of an important statistical significance (Sig. 0.151).

The mean of depersonalization in the male group is 2.24 while in the female group the mean is 1.36. It is obvious that depersonalization prevails in the male group and this difference is of an important significance (Mann-Whitney, sig. 0.11).

The distribution of personal accomplishment (which score is being reversed so high scores mean high burnout) looks to be the same across categories of gender since there are no significant statistical evidence supporting the opposite (sig. 0.499). In other words the higher mean of personal accomplishment in males (1.47) is not of statistical significance compared to females' mean (1.28).

H2 *There is a difference of burnout dimensions between age categories* (Appendix IV)

In order to test this hypothesis one-way ANOVA is used in all three dimensions of burnout. The highest emotional exhaustion average mean is observed in the 31-35 years group (3.43), with 41-45 years group as second (3,15). The lowest score is observed in the 21-25 years group (2.17). These differences of means between groups are of no statistical significance (sig. 0.501). From the main post hoc tests (Tukey HSD, Scheffe, Bonferroni and Tamhane) nothing of significant importance is resulted, as expected.

The highest mean value between age groups of depersonalization is observed in the 31-35 years group (1.99), very close to the second highest group (41-45, 1.93). The lowest score is observed in the 21-25 years old group (1.16). According to the ANOVA there seems to be no significant difference of depersonalization between groups (sig. 0.246). Nothing important is excluded from the post hoc tests.

The 31-35 years group has the highest mean of personal accomplishment (1.88) with the lowest mean in 41-45 years group (1.00). According to the ANOVA there is no significant difference between age groups with F=1.243 and sig. 0.298.

H3 *There is a difference of burnout dimensions between marital status groups* (Appendix V)

ANOVA tool is used to test this hypothesis as well. As for prevailing group it is observed that the higher means are in Divorced and Widowed groups (4.51 & 4.78 respectively), though the number of nurses in these groups is small (n=8) compared to the sample. Lowest score is observed in the married group (mean=2.64). These differences seem to be significantly important with F=4.302 and sig. 0.007. From the post hoc tests and especially in Tukey HSD (sig. 0.39) and Bonferonni (sig. 0.47) a statistically significant difference is reported between the married and divorced group. It is important to notice though, that the number of divorced nurses is only 5.

Similar results are generated in the case of depersonalization between marital status groups. The highest means are observed again in divorced and widowed groups (2.76 & 3.20 respectively) and the lowest mean in the married group (1.31) with the limitation of small number of nurses in the two prevailing groups (n=8). These differences seem to be of significant statistical importance since in the ANOVA F=3.656 with sig. 0.016. Post hoc tests though do not result any significant findings.

Differences in personal accomplishment of statistically significant importance are generated through ANOVA between marital status groups (F=4.995, sig. 0.003). The highest mean is observed in the widowed group (3.17) and the lowest in married group (1.07). Tukey HSD (SIG. 0.006), Scheffe (sig. 0.13) and Bonferroni (0.006) tests underlie the significant difference between the married and widowed group.

H4 *There is a difference of burnout dimensions between different number of children groups* (Appendix VI)

As for emotional exhaustion the lowest mean is observed in the one child group (1.95) with an increasing tendency up to four or more group (4.59). It is important to observe that the no children group compared to the one child group has a higher emotional exhaustion not of a significant importance though (post hoc tests with no significant differences). This result could be explained by the results in the marital status where singles have higher emotional exhaustion than married, as they

usually don't have children. ANOVA shows a marginal significant difference between groups (F=2.563, sig. 0.045) with Tamhane post hoc test to result a significant difference between the one child group and the four or more children group (0.023). An implication here is that the number of nurses with four children or more is small (n=3).

Similar results are generated from ANOVA between number of children groups as for depersonalization. There is a significant difference between groups (F=2.977, sig. 0.025) with depersonalization in one child group significantly different compared to the four or more group as post hoc tests indicate. The no children group's mean (1.53) is higher than the one child group's mean (0.88) which is the lowest of all. Highest mean belongs to the four or more children group (3.47).

In the ANOVA for personal accomplishment between number of children groups there is no significant difference between them, though it's marginal (F=2.160, sig. 0.082). The Welch robust test of equality of means though is statistically important (sig. 0.018). In the post hoc tests a significant difference is observed between the one child group and the four or more children group.

H5 *There is a difference of burnout dimensions in different education levels* (Appendix VII)

The highest emotional exhaustion mean is observed in the IEK group (3.77) and the lowest in the 2 years school group (2.69). According to ANOVA no significant difference between groups is observed (F=1.749, sig. 164).

The highest depersonalization mean is observed in the TEI group (1.93) and the lowest in the AEI group (0.90), though the number of nurses in the AEI group is small (n=2). There is no significant difference between groups according to ANOVA (F=0.636, sig. 0.594).

The highest personal accomplishment mean is observed in the IEK group (1.78) whether the lowest in the AEI group (0.56). According to ANOVA there is no significant difference between groups (F=0.821, sig. 0.486).

H6 *There is a difference of burnout dimensions between work roles* (Appendix VIII)

Emotional exhaustion seems to prevail in the nurse group (3.21), with the lowest mean to be 2.72 in the chief nurse group. There is no significant difference between groups (F=0.241, sig. 0.868) according to ANOVA.

Similar results generate from the ANOVA with no difference of depersonalization between groups (F=1.450, sig. 0.235). Highest mean is observed in the nurse group and lowest in the chief nurse group (2.00 & 0.90 respectively).

Personal accomplishment mean is highest in the head nurse group (1.43), with the lowest in the chief nurse group (0.31). A significance of 0.313 (F=1.208) results no important difference between groups in the ANOVA.

H7 *There is a difference of burnout dimensions indifferent categories of nursing experience (years)* (Appendix IX)

Emotional exhaustion mean is higher in the ‘’experienced’’ 12-17 group (3.78), with the lowest mean in the 3-7 group (2.61). ANOVA shows no significant difference between groups with F=1.098 and sig. 0.369.

Depersonalization is higher in the 12-17 group (2.17), very close to the <1 group (2.10). The lowest mean is observed in the 1-3 group (1.00). ANOVA shows no significant difference between groups with F=0.964 and sig. 0.446.

Personal accomplishment mean is higher in the 1-3 group (2.28) and lower in >17 group (0.83). Again there is no significant difference as it is derived from ANOVA with F=1.653 and sig. 0.157.

H8 *There is a difference of burnout dimensions in different categories of years in current clinic* (Appendix X)

It seems that with years passing in the clinic, excluding their first year of work, emotional exhaustion is rising. Highest mean is observed in the 7-9 group (3.78) and lowest in the 3-5 group (2.50). Differences between groups in ANOVA are of no significant importance (F=1.298, sig. 0.275).

Depersonalization mean is higher in <1 group (2.10) and lower in 3-5 group (1.17). Depersonalization mean between group of years in the current clinic has no significant difference (F=0.977, sig. 0.438).

ANOVA between groups shows no significant difference as for personal accomplishment (F=0.798, sig. 554). Values of personal accomplishment seem to

stabilize after 5 years in current clinic. Highest value is observed in the < 1 group (2.25), while lowest in the 3-5 group (1.12).

H9 *There is a difference of burnout dimensions in different shift* groups (Appendix XI)

Emotional exhaustion is higher in the day and night group (3.06) than in the day only group (2.78) but the difference observed is not significantly important since the Independent samples Mann-Whitney U test suggested to retain the null hypothesis, that is the distribution of emotional exhaustion average is the same across categories of shifts (sig. 514).

Depersonalization is higher in the day and night group comparing to the day only group (1.71 & 1.31 respectively). Mann-Whitney U test proved no significant difference between the two groups (sig. 0.473).

Personal accomplishment is higher in the day and night group (1.42) than in the day only group (1.09). According to Mann-Whitney U test there is no significant difference between the two groups (sig. 0.137).

H10 *There is a difference of burnout dimensions between groups with and without serious family issue* (Appendix XII)

The differences observed in all three dimensions between the groups of serious family issue are all statistically important. This is very interesting since this is not a work factor that affects job burnout levels; although it is rational that a serious family issue increases stress.

Means of all three dimensions of burnout are higher in the serious family issue group. The independent samples t-test generates a statistically important difference between the two groups for emotional exhaustion (F=2.347, sig. 0.000). Independent samples Mann-Whitney U test for depersonalization and personal accomplishment proved also a statistically important result (sig. 0.001 & sig. 0.000 respectively).

H11 *Emotional exhaustion will be positively related to Depersonalization*

To examine the relationship between emotional exhaustion and depersonalization a bivariate correlation will be used. Both dimensions of burnout in this study don't follow a normal distribution (Shapiro-Wilk for both $p<0.05$)

(Appendix XIII). In that case non-parametric correlations will be used (Table 18). According to the results, the correlation is positive, indicating that the greater the depersonalization the greater the emotional exhaustion with r = 0.675 (sig. 0.000) which is also strong.

Table 18: Correlations

			Emotional exhaustion average	Depersonalization average	Personal accomplishment reversed average
Spearman's rho	Emotional exhaustion average	Correlation Coefficient	1,000	,675**	,656**
		Sig. (2-tailed)	.	,000	,000
		N	78	78	78
	Depersonalization average	Correlation Coefficient	,675**	1,000	,404**
		Sig. (2-tailed)	,000	.	,000
		N	78	78	78
	Personal accomplishment reversed average	Correlation Coefficient	,656**	,404**	1,000
		Sig. (2-tailed)	,000	,000	.
		N	78	78	78

**. Correlation is significant at the 0.01 level (2-tailed).

H12 *Emotional exhaustion will be positively related to Personal accomplishment*

Table 18 demonstrates a positive and strong correlation between emotional exhaustion and personal accomplishment with r = 0.656 (sig. 0.000). Again a non parametric correlation is used (Shapiro-Wilk for all burnout dimensions $p<0.05$).

H13 *Depersonalization will be positively related to Personal accomplishment*

Spearman's r is used again here which is r = 0.404 (sig. 0.000). This result indicates a moderate, positive, significant correlation between depersonalization and

personal accomplishment. Personal accomplishment in literature correlates with emotional exhaustion and depersonalization in a negative way. In this research scores of personal accomplishment are reversed, so as higher scores indicate higher burnout.

H14 *Burnout will be positively related to Role Conflict*

In order to examine these relationships, non parametric correlation will be used since the criterion of normality is not fulfilled (Tables 19, 20).

Generated results indicate a strong, positive correlation between emotional exhaustion and role conflict with statistical significance (r = 0.605, sig. 0.000). Depersonalization also correlates in a positive way to role conflict but their relation is moderate (r = 0.490, sig. 0.000). Personal accomplishment (reversed) also correlates in a positive, moderate, significant way to role conflict (r = 0.412, sig. 0.000)

Table 19: Correlations

			Emotional exhaustion average	Depersonalization average	Personal accomplishment reversed average	Role conflict average
Spearman's rho	Emotional exhaustion average	Correlation Coefficient	1,000	,675**	,656**	,605**
		Sig. (2-tailed)	.	,000	,000	,000
		N	78	78	78	78
	Depersonalization average	Correlation Coefficient	,675**	1,000	,404**	,490**
		Sig. (2-tailed)	,000	.	,000	,000
		N	78	78	78	78
	Personal accomplishment reversed average	Correlation Coefficient	,656**	,404**	1,000	,412**
		Sig. (2-tailed)	,000	,000	.	,000
		N	78	78	78	78
	Role conflict average	Correlation Coefficient	,605**	,490**	,412**	1,000
		Sig. (2-tailed)	,000	,000	,000	.
		N	78	78	78	78

**. Correlation is significant at the 0.01 level (2-tailed).

H15 *Burnout will be positively related to Role Ambiguity*

Role ambiguity's correlation with emotional exhaustion, as shown in Table 20, is positive, moderate and significant (r = 0.411, sig. 0.000). A weaker correlation is generated between depersonalization and role ambiguity, though positive and significant (r = 0.275, sig. 0.015). A moderate, positive and significant correlation is indicated (r = 0.497, sig. 000) between personal accomplishment (reversed) and role ambiguity.

Table 20: Correlations

			Emotional exhaustion average	Depersonalization average	Personal accomplishment reversed average	Role ambiguity average
Spearman's rho	Emotional exhaustion average	Correlation Coefficient	1,000	,675**	,656**	,411**
		Sig. (2-tailed)	.	,000	,000	,000
		N	78	78	78	78
	Depersonalization average	Correlation Coefficient	,675**	1,000	,404**	,275*
		Sig. (2-tailed)	,000	.	,000	,015
		N	78	78	78	78
	Personal accomplishment reversed average	Correlation Coefficient	,656**	,404**	1,000	,497**
		Sig. (2-tailed)	,000	,000	.	,000
		N	78	78	78	78
	Role ambiguity average	Correlation Coefficient	,411**	,275*	,497**	1,000
		Sig. (2-tailed)	,000	,015	,000	.
		N	78	78	78	78

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

H16 *Burnout will be negatively related to Organizational Commitment dimensions*

The three dimensions of organizational commitment, affective, continuance and normative are correlated with the three dimensions of burnout (Tables 21, 22, 23). Again Spearman's r is used because the criterion of normality isn't fulfilled.

Emotional exhaustion correlates with affective commitment negatively in a weak, though significant way (r = -0.389, sig. 0.000), with continuance commitment negatively in a weak but not significant way (r = -0.209, sig. 0.066) and with normative commitment negatively in a weak but not significant way (r = -0.220, sig. 0.053).

Depersonalization correlates with affective commitment negatively in a weak, though significant way (r = -0.249, sig. 0.028). Continuance and normative commitment don't correlate with depersonalization (r = -0.137 & r = -0.118 respectively).

Personal accomplishment (reversed) correlates negatively with affective commitment in a moderate, though significant way (r = -0.439, sig. 0.000). Personal accomplishment (reversed) correlates with continuance commitment in a weak, negative and marginally significant way (r = -0.225, sig. 0.047) and with normative commitment in a weak, negative and marginally not significant way (r = -0.220, sig. 0.053).

Table 21: Correlations

			Emotional exhaustion average	Depersonalization average	Personal accomplishment reversed average	Affective commitment average
Spearman's rho	Emotional exhaustion average	Correlation Coefficient	1,000	,675**	,656**	-,389**
		Sig. (2-tailed)	.	,000	,000	,000
		N	78	78	78	78
	Depersonalization average	Correlation Coefficient	,675**	1,000	,404**	-,249*
		Sig. (2-tailed)	,000	.	,000	,028

	Personal accomplishment reversed average	N	78	78	78	78
		Correlation Coefficient	,656**	,404**	1,000	-,439**
		Sig. (2-tailed)	,000	,000	.	,000
		N	78	78	78	78
	Affective commitment average	Correlation Coefficient	-,389**	-,249*	-,439**	1,000
		Sig. (2-tailed)	,000	,028	,000	.
		N	78	78	78	78

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Table 22: Correlations

			Emotional exhaustion average	Depersonalization average	Personal accomplishment reversed average	Continuance commitment average
Spearman's rho	Emotional exhaustion average	Correlation Coefficient	1,000	,675**	,656**	-,209
		Sig. (2-tailed)	.	,000	,000	,066
		N	78	78	78	78
	Depersonalization average	Correlation Coefficient	,675**	1,000	,404**	-,137
		Sig. (2-tailed)	,000	.	,000	,232
		N	78	78	78	78
	Personal accomplishment reversed average	Correlation Coefficient	,656**	,404**	1,000	-,225*
		Sig. (2-tailed)	,000	,000	.	,047
		N	78	78	78	78
	Continuance commitment average	Correlation Coefficient	-,209	-,137	-,225*	1,000
		Sig. (2-tailed)	,066	,232	,047	.
		N	78	78	78	78

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Table 23: Correlations

			Emotional exhaustion average	Depersonalization average	Personal accomplishment reversed average	Normative commitment
Spearman's rho	Emotional exhaustion average	Correlation Coefficient	1,000	,675**	,656**	-,220
		Sig. (2-tailed)	.	,000	,000	,053
		N	78	78	78	78
	Depersonalization average	Correlation Coefficient	,675**	1,000	,404**	-,118
		Sig. (2-tailed)	,000	.	,000	,303
		N	78	78	78	78
	Personal accomplishment reversed average	Correlation Coefficient	,656**	,404**	1,000	-,220
		Sig. (2-tailed)	,000	,000	.	,053
		N	78	78	78	78
	Normative commitment	Correlation Coefficient	-,220	-,118	-,220	1,000
		Sig. (2-tailed)	,053	,303	,053	.
		N	78	78	78	78

**. Correlation is significant at the 0.01 level (2-tailed).

H17 *Burnout will be negatively related to Job Satisfaction dimensions*

Burnout and job satisfaction are multidimensional constructs and their distinctness is in doubt (Koustelios, 1991). In this research with the use of Measure of Job Satisfaction (MJS) (Traynor and Wade, 1993) organizational characteristics such as workload, support and training, which are known to constitute burnout antecedents (Leiter & Maslach, 1999; 2005a; 2005b), are correlated with emotional exhaustion, depersonalization and personal accomplishment. The results, which are demonstrated

in Table 24, indicate mostly a moderate to strong, negative and significant correlation between emotional exhaustion and satisfaction subscales. Depersonalization is correlated to satisfaction subscales in a weak, negative and mostly significant way (apart from pay & standards of care which don't correlate to depersonalization). At last, personal accomplishment correlates to satisfaction dimensions with a moderate to strong, negative and significant way (apart from the weak relation to pay & standards of care).

Table 24: Correlations between burnout and job satisfaction dimensions

Satisfaction	Emotional exhaustion	Depersonalization	Personal accomplishment
Personal	r = -0.569, sig. 0.000	r = -0.302, sig. 0.007	r = -0.553, sig. 0.000
Workload	r = -0.601, sig. 0.000	r = -0.302, sig. 0.007	r = -0.658, sig. 0.000
Professional support	r = -0.602, sig. 0.000	r = -0.313, sig. 0.005	r = -0.679, sig. 0.000
Training	r = -0.567, sig. 0.000	r = -0.289, sig. 0.010	r = -0.502, sig. 0.000
Pay	r = -0.368, sig. 0.001	r = -0.154, sig. 0.179	r = -0.312, sig. 0.005
Standards of care	r = -0.357, sig. 0.001	r = -0.184, sig. 0.106	r = -0.305, sig. 0.007
Prospects	r = -0.546, sig. 0.000	r = -0.268, sig. 0.018	r = -0.594, sig. 0.000

It is noteworthy to mention that the adjustment of job satisfaction as a factor in the correlations between all the three dimensions of burnout and role ambiguity, role conflict and dimensions of organizational commitment changes drastically the relations between the variables. Using partial correlation, with controlling factor overall job satisfaction, role conflict to personal accomplishment, role ambiguity to emotional exhaustion, role ambiguity to depersonalization, affective commitment to emotional exhaustion, affective commitment to depersonalization and affective commitment to personal accomplishment don't correlate anymore. All the rest correlations stay significant but are weakened to a point.

Multiple Linear Regression analysis

In order to create predictive models for each of the dimensions of burnout a mix of hierarchical and stepwise regression model is used. Factors as role conflict, organizational commitment, role ambiguity, workload, training, pay and support, as

described in the literature review, compose important antecedents of burnout. In this research statistical criteria are also taken in account as for the number and the turn the independent variables enter the equation. Normality (studentized residual histograms), independence (Durbin-Watson, studentized residual plots), linearity (partial regression plots), multicollinearity (VIF, eigenvalues, tolerance, condition index), outliers and influential points (DFFT, Cook's distance, centered leverage), over/underfitting will be taken in account as criteria for the rightness of the predictive models.

Multiple Linear Regression analysis: Emotional exhaustion

The dependent variable is emotional exhaustion. The independent variables added are role conflict, serious family issue at the time being, satisfaction with workload, satisfaction with training, satisfaction with pay, normative commitment and education (4 years school vs. 2 years school). The final method used for variables in order to enter the equation is the stepwise method.

Table 25:Emotional exhaustion Model Summary[f]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	,633[a]	,400	,392	1,21144	,400	50,030	1	75	,000	
2	,745[b]	,555	,543	1,05024	,155	25,790	1	74	,000	
3	,807[c]	,651	,637	,93653	,096	20,062	1	73	,000	
4	,860[d]	,739	,724	,81597	,088	24,163	1	72	,000	
5	,869[e]	,756	,739	,79419	,017	5,004	1	71	,028	2,005

a. Predictors: (Constant), Role conflict average

b. Predictors: (Constant), Role conflict average, Satisfaction with training average

c. Predictors: (Constant), Role conflict average, Satisfaction with training average, Satisfaction with pay average

d. Predictors: (Constant), Role conflict average, Satisfaction with training average, Satisfaction with pay average, Serious family issue at the time being

e. Predictors: (Constant), Role conflict average, Satisfaction with training average, Satisfaction with pay average, Serious family issue at the time being, Satisfaction with workload average

f. Dependent Variable: Emotional exhaustion average

Finally, predictors of emotional exhaustion are role conflict, satisfaction with training, satisfaction with pay, serious family issue at the time being and satisfaction with workload. These predictors (Table 25) are shown to explain the 75.6% of dispersion in emotional exhaustion with ANOVA results (F=43.983, sig. 0.000) rejecting the null hypothesis (R^2 is near 0).

Regression equation is Emotional exhaustion = 0.612xrole conflict – 0.675xtraining satisfaction + 0.477xpay satisfaction +0.995xserious family issue – 0.215xworkload satisfaction + 2.220

The t value indicates the best predictors in the model. It needs to be >+2 or <-2 in order for the variable to be taken into account. The higher the absolute t value the better the predictor. All predictors in the model are above absolute t value with statistical significance ($p<0.05$) (Table 26). Role conflict is the best predictor of the model.

Table 26: Absolute t values emotional exhaustion

	Standardized beta coefficients	T absolute value	Sig
Role conflict	0.565	|7.460|	0.000
Training	-0.570	|-6.548|	0.000
Pay	0.481	|5.214|	0.000
Serious family issue	0.278	|4.227|	0.000
Workload	-0.169	|-2.237|	0.028

Independence: Durbin Watson needs to be among 1.5 and 2.5. In this model it is 2.005.

Normality: the histogram and the normal p-p plot of regression standardized residuals prove the normality (Appendix XIV).

Linearity: partial regression plots of the predictors (R^2 linear) show a strong linear relationship with emotional exhaustion and regression standardized predicted value/regression studentized residual scatter plot (no patterns, no clustering (Appendix XV)

Multicollinearity: VIF values are below 10, eigenvalues don't reach close to 0, condition indexes are below 30 and tolerance for all predictors is above 0.1 (10%).

Outliers and influential points: With N=78 (full sample) Cook's distances were below 1. In the standardized DFFIT diagram with sequence case 46 was over 1. It looks that this case is an influential point so it is excluded from the regression with improvement in Cook's distance and DFFIT (Appendix XVI).

Over/under fitting: According to Mallow's prediction criterion C=10. In this model variables that entered initially are 8, a number which is near Mallow's criterion.

Multiple Linear Regression analysis: Depersonalization

The dependent variable is depersonalization. The independent variables added are role conflict, serious family issue at the time being, satisfaction with training, satisfaction with pay, normative commitment, continuance commitment, affective commitment, role ambiguity, marital status and gender. The final method used for variables in order to enter the equation is the backward method.

Table 27: Depersonalization Model Summary[g]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	,655[a]	,430	,343	1,08414	,430	4,971	10	66	,000	
2	,655[b]	,429	,353	1,07637	,000	,043	1	66	,836	
3	,653[c]	,426	,358	1,07152	-,003	,389	1	67	,535	
4	,647[d]	,419	,360	1,07018	-,007	,827	1	68	,366	
5	,634[e]	,402	,351	1,07766	-,017	1,982	1	69	,164	
6	,626[f]	,391	,349	1,07971	-,011	1,271	1	70	,264	2,262

a. Predictors: (Constant), Normative commitment, Married vs Single, Φύλο, Serious family issue at the time being, Continuance commitment average, Satisfaction with training average, Role conflict average, Role ambiguity average, Affective commitment average, Satisfaction with pay average

b. Predictors: (Constant), Normative commitment, Married vs Single, Φύλο, Serious family issue at the time being, Continuance commitment average, Satisfaction with training average, Role conflict average, Role ambiguity average, Satisfaction with pay average

c. Predictors: (Constant), Normative commitment, Φύλο, Serious family issue at the time being, Continuance commitment average, Satisfaction with training average, Role conflict average, Role ambiguity average, Satisfaction with pay average

d. Predictors: (Constant), Normative commitment, Φύλο, Serious family issue at the time being, Continuance commitment average, Satisfaction with training average, Role conflict average, Satisfaction with pay average

e. Predictors: (Constant), Normative commitment, Φύλο, Serious family issue at the time being, Satisfaction with training average, Role conflict average, Satisfaction with pay average

f. Predictors: (Constant), Φύλο, Serious family issue at the time being, Satisfaction with training average, Role conflict average, Satisfaction with pay average

g. Dependent Variable: Depersonalization average

Finally, predictors of depersonalization are role conflict, satisfaction with training, satisfaction with pay, serious family issue at the time being and gender (males). These predictors (Table 27) are shown to explain the 43% of dispersion in depersonalization with ANOVA results (F=9.133, sig. 0.000) rejecting the null hypothesis (R^2 is near 0).

Regression equation is Depersonalization = 0.967xserious family issue +0.363xrole conflict + 0.381xpay satisfaction-0.384 xtraining satisfaction – 0.491xgender + 0.477

The t value indicates the best predictors in the model. It needs to be >+2 or <-2 in order for the variable to be taken into account. The higher the absolute t value the better the predictor. One predictor (Gender) has a price of absolute t below 2 with (p>0.05) (Table 28). Gender doesn't constitute a good predictor of depersonalization. Role conflict is the best predictor of the model.

Table 28: Absolute t values depersonalization

	Standardized beta coefficients	T absolute value	Sig
Role conflict	0.382	|3.377|	0.001
Pay	0.445	|3.175|	0.002
Serious family issue	0.314	|3.114|	0.003
Training	-0.376	|-2.971|	0.004
Gender	-0.164	|-1.752|	0.084

Independence: Durbin Watson needs to be among 1.5 and 2.5. In this model it is 2.262.

Normality: the histogram and the normal p-p plot of regression standardized residuals prove the normality (Appendix XVII).

Linearity: partial regression plots of the predictors (R^2 linear) show a weak to moderate linear relationship with depersonalization and regression standardized predicted value/regression studentized residual scatter plot (no patterns, no clustering (Appendix XVIII)

Multicollinearity: VIF values are below 10, eigenvalues don't reach close to 0, condition indexes are below 30 and tolerance for all predictors is above 0.1 (10%).

Outliers and influential points: With N=78 (full sample) Cook's distances for all cases were below 1. In the standardized DFFIT diagram with sequence case 45 was over 1. It looks that this case is an influential point so it is excluded from the regression with improvement in Cook's distance and DFFIT (Appendix XIX).

Over/under fitting: According to Mallow's prediction criterion C=10. In this model variables that entered initially are 11, a number which is near Mallow's criterion.

Multiple Linear Regression analysis: Personal accomplishment

The dependent variable is personal accomplishment (reversed). The independent variables added are role conflict average, serious family issue at the time being, satisfaction with prospects, satisfaction with professional support, normative commitment, continuance commitment, affective commitment, satisfaction with workload, role ambiguity and nursing experience (years). The final method used for variables in order to enter the equation is the stepwise method.

Table 29: Personal accomplishment Model Summary[f]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	,630[a]	,397	,389	,86759	,397	50,022	1	76	,000	
2	,702[b]	,493	,479	,80079	,096	14,209	1	75	,000	
3	,735[c]	,540	,521	,76781	,047	7,582	1	74	,007	
4	,756[d]	,571	,548	,74629	,031	5,330	1	73	,024	
5	,784[e]	,614	,587	,71311	,043	7,951	1	72	,006	1,897

a. Predictors: (Constant), Satisfaction with workload average

b. Predictors: (Constant), Satisfaction with workload average, Role ambiguity average

c. Predictors: (Constant), Satisfaction with workload average, Role ambiguity average, Serious family issue at the time being

d. Predictors: (Constant), Satisfaction with workload average, Role ambiguity average, Serious family issue at the time being, Nursing experience (years)

e. Predictors: (Constant), Satisfaction with workload average, Role ambiguity average, Serious family issue at the time being, Nursing experience (years), Satisfaction with prospects average

f. Dependent Variable: Personal accomplishment reversed average

Finally, predictors of depersonalization are satisfaction with workload, role ambiguity, serious family issue at the time being, nursing experience (the less years of experience nurses have the lower personal accomplishment present) and satisfaction with prospects. These predictors (Table 29) are shown to explain the 61.4%% of dispersion in personal accomplishment with ANOVA results (F=22.908, sig. 0.000) rejecting the null hypothesis (R^2 is near 0).

Regression equation is Personal accomplishment = 0.574xserious family issue +0.236xrole ambiguity - 0.237xprospects satisfaction -0.213xnursing experience – 0.265xworkload satisfaction + 3.502

The t value indicates the best predictors in the model. It needs to be >+2 or <-2 in order for the variable to be taken into account. The higher the absolute t value the better the predictor. All predictor have prices over 2 absolute t with ($p<0.05$) (Table 30Satisfaction with workload is the best predictor of the model with slight differences from the other predictors.

Table 28: Absolute t values personal accomplishment

	Standardized beta coefficients	T absolute value	Sig
Workload	-0.289	|-2.973|	0.004
Nursing experience	-0.214	|-2.858|	0.006
Prospects	-0.261	|-2.820|	0.006
Serious family issue	0.223	|2.669|	0.009
Role ambiguity	0.233	|2.421|	0.018

Independence: Durbin Watson needs to be among 1.5 and 2.5. In this model it is 1.897.

Normality: the histogram and the normal p-p plot of regression standardized residuals prove the normality (Appendix XX).

Linearity: partial regression plots of the predictors (R^2 linear) show a weak to moderate linear relationship with personal accomplishment and regression standardized predicted value/regression studentized residual scatter plot (no patterns, no clustering (Appendix XXI)

Multicollinearity: VIF values are below 10, eigenvalues don't reach close to 0, condition indexes are below 30 and tolerance for all predictors is above 0.1 (10%).

Outliers and influential points: With N=78 (full sample) Cook's distances for all cases were below 1. In the standardized DFFIT diagram with sequence case 45 was over 1. It looks that this case is an influential point so it is excluded from the regression with improvement in Cook's distance and DFFIT (Appendix XXII).

Over/under fitting: According to Mallow's prediction criterion C=10. In this model variables that entered initially are 11, a number which is near Mallow's criterion.

Discussion

In the current section the results of the empirical study are discussed and compared with respective findings of the literature. Next, suggestions and solutions are proposed by the author so as to cope with the managerial and practical implications which burnout process causes.

Findings

The first part of the findings has to do with the profile of the mental health nurses in the sample. Participants were asked to give some information about their age, marital status, education, number of children, gender, years of experience in nursing and in current clinic, work role, kind of shifts and serious family issue at the time being. Most of the nurses are females (71.8%). The prevailing age category is 26-40 years old representing 66.7% of the sample. Most of the nurses are married (60.3%) with children (61.5%) and their education is mainly a 2 years school (60.3%) and TEI (25.6%); most of the nurses have lower education (71.8%). Administrative positions (chief & head nurse) represent only a 17.9% of the sample. A 55.1% of

nurses work in their current clinic for more than 5 years, showing that they seem to be loyal to the organization or have no other alternative. Newcomers account only for the 2.6% of the sample. Recruitment seems to be limited. Most of the nurses work day and night (74.4%). A serious family issue is present in 24.4% of the participants. There are some differences as for the profile of the sample compared to other researches. Malliarou et al (2008) in their study of burnout of nursing personnel in a regional university hospital with a similar size of sample (N=64) found a larger proportion of female nurses (95.31%), with less nurse assistants (36%) and more experienced employees.

According to the categorization of burnout levels (Maslach, 1996) in this research a 10.3% accounts for high burnout (high level in all three dimensions). The high level of emotional exhaustion, reaching 53.8%, is very interesting and worrying at the same time while high level of burnout for depersonalization and personal accomplishment accounts for 24.4% and 25.6% respectively. These results agree with the research of Stanley (2006) where, among 115 registered nurses and licensed practical nurses, high burnout accounted for 8.1%, although more than 40.0% of the sample reported high levels of emotional exhaustion, or depersonalization, or low levels of personal accomplishment. The results differ to Carson et al.'s (1999) study of 648 ward-based British nurses where 5.7% of total sample could be described as being high burnout, so as to Kilfedder et al.'s (2001) study of 510 British psychiatric nurses where only 2.0% of the sample could be categorized as having high burnout overall. In these two last studies though, emotional exhaustion levels where relatively high, agreeing with this research (45% & 38% respectively), but depersonalization levels where much lower (13% & 7% respectively). Data from the research of Spooner and Patton (2007) revealed that their sample of nurses reported moderate levels of Emotional Exhaustion, moderately high levels of Depersonalisation, and moderately low levels of Personal Accomplishment. This finding is consistent with previous nursing studies in Greece (Iacovides et al 1997), Germany (Bakker et al 2000), Poland (Schaufeli and Janczur 1994), and the United States (Turnipseed and Turnipseed 1997).

In this study it was also tested if there are differences of burnout dimensions between different socio-demographic groups (hypotheses H1-H10).

When comparing the total scores and the personal and workplace features of the questionnaire, Palfi et al. (2008) came to the conclusion that the socio-demographic data are not significant for the formation of burnout research. All three dimensions of burnout were higher in males with only depersonalization prevalence being statistically important. These results agree with Lee & Ashforth (1993b) who state that a consistent sex difference is that males often score higher on cynicism. In Yousefy and Ghassemi's study (2006) comparison of male and female nurses working in psychiatric units showed that male nurses experienced a higher degree of emotional exhaustion. This diffference, though statistically not significant, may be attributed to nurse's expectations from their job and their adjustment in their work place, according to the authors. In general, though, it is argued that sex is not a strong predictor of burnout.

As for age the lowest score of emotional exhaustion is observed in the young nurses. Scores incline till the age of 35-40 and then start to decline. Depersonalization follows the same distribution with nurses aged 31-35 having higher levels. As for the diminished personal accomplishment the lowest score is observed in 41-45 years old nurses group. These findings disagree with Yousefy and Ghassemi findings (2006) who demonstrated that the older the higher the burnout. According to these authors it is possible that this observation to relate to the very fact that with age one's tolerance for demanding situations and stressful work environment decreases. In the current study the decline of burnout through aging maybe could be explained of the stability older nurses feel, so as from the fact that they know the everyday routine so well. Brewer and Shapard's (2004) meta-analysis about the effects of age and experience on burnout provides support for this outcome. The findings agree with Lee & Ashforth (1993b) since they report that burnout among younger employees is higher. Age, although is the factor that has been most consistently related to burnout, in the current study doesn't significantly relates to it.

According to Yousefy and Ghassemi (2006) singles seem to be more prone to burnout compared to married nurses. These findings agree with these of the current study where in all three dimensions the lowest scores are in the married group. Divorced and widowed nurses present the highest burnout with a statistical significance.

As for the number of children it is interesting to note that nurses with one child have lower burnout than the nurses with no children. It is possible that this difference, which is no significant, to be biased from marital status since most married nurses have children in the research. Nurses with four or more children have higher burnout of all groups but the number is relatively small (n=3).

Nurses who graduated from IEK schools score higher in emotional exhaustion and diminished personal accomplishment, while nurses from TEI score higher in depersonalization. Lower levels in all three dimensions are observed in the AEI nurses. All these differences are of no statistical significance. These results disagree with the findings of Shaufeli & Enzmann (1998) who found that higher level of education correlates to higher burnout levels. They accounted this finding to the fact that people with higher education have jobs with greater responsibilities and higher stress. In this study the higher levels of burnout observed in nurses with a lower education maybe explained by the difference in occupation (hard working, low paid) and status.

Similar results to education are generated from work role. The difference here is that, although administrative positions, such as these of the chief and head nurse, score low on emotional exhaustion and depersonalization, have high levels of burnout attributed to personal accomplishment. Highly educated people have higher expectations for their jobs, and are thus more distressed if these expectations are not realized (Shaufeli & Enzmann, 1998).All these results are of no statistical significance.

Shift working, including working nights, has shown to be a burnout factor both in the study of Malliarou et al. (2008) and previous studies (Shimizu et al., 2005). In the current research although burnout is higher in the day and night shifts group this result isn't statistically significant.

In the current study emotional exhaustion and depersonalization prevail in the more experienced nurses (12-17 years of experience group) findings that agree with the literature. An explanation of this fact is given by Yousefy and Ghassemi (2006) and it refers to the beginning of nurses career when they be more motivated but in due time their eagerness to continue as an ordinary nurse may decline, as they do not see coherence between their needs and the stresses which they experience.

A serious family issue although not an organizational factor, it is found to relate in a strong, positive way with burnout. Nurses with a serious problem in their home report almost double scores of burnout comparing to the other nurses. This result is rational because serious issues in the life of nurses increase stress and may even cause depression (Brown & Moran, 1997).

The present study deals with the impact of organizational factors such as role conflict, role ambiguity, organizational commitment and job satisfaction upon burnout. Past literature has proved significant relationships between burnout dimensions and these factors (Maslach et al, 2001; Ahola & Hakanen, 2007; Demerouti et al., 2001b; Janssen, Schaufeli & Houkes, 1999; Taris et al., 1999)

However, not all relationships proved in past literature have been confirmed in this study. Hypotheses of correlation between dimensions of burnout and organizational factors were tested (H11-H17).

The dimensions of burnout related to each other in a strong, positive, statistically significant way. Personal accomplishment in literature correlates with emotional exhaustion and depersonalization in a negative way. In this research scores of personal accomplishment are reversed, so as higher scores indicate higher burnout. The strong correlations between the dimensions of burnout are demonstrated widely in the literature (Maslach et al., 2001). According to Leiter and Maslach (2000) cognitive distancing is such an immediate reaction to exhaustion that a strong relationship from exhaustion to cynicism. Also Leiter (1993) suggests that inefficacy (personal accomplishment) appears to develop in parallel with the other two burnout aspects, rather than sequentially.

Job stressors, which are role conflict and role ambiguity, in this study correlate in a moderate/strong, positive and, in all cases, statistically significant way with burnout dimensions. It seems that the phenomenon of conflicting sets of directions a nurse gets from different supervisors or administrators in the clinic is one of the major problems that generates stress. In addition nurses seem to be unclear on how to perform or behave in psychiatric clinics. Similar findings from the literature support the results. In the study of Piko (2006) among Hungarian health care staff role conflict was a factor contributing positively to emotional exhaustion and depersonalization. In Lu's study (2008) seven out of ten Organizational Role Stressor (ORS) dimensions

have been found to be positively correlated with burnout, with Role Expectation Conflict (REC) and Role Overload (RO) being the most significant. This means that when an individual nurse has multiple functions and gets confusing directions is predisposed to burnout. Moreover, when a nurse has a vague understanding of her functions and job description, she is also predisposed to burnout. Barber and Iwai (1996) in a sample of 75 nurses caring for people with dementia demonstrated that role conflict and role ambiguity were the best predictors of burnout. Role conflict was a significant predictor of all three dimensions of burnout in a study of Stanley (2006) among 115 nurses in a psychiatric hospital in Atlantic Canada.

Organizational commitment dimensions correlated in a weak, negative way with burnout dimensions. Only personal accomplishment had a moderate and statistically significant correlation with affective commitment. Neither affective, nor continuance, or normative commitment were predictors of any of the dimensions of burnout. This could maybe explained by the drastic change in the correlations (weakening effect) that job satisfaction causes when adjusted as a controlling factor to the comparisons (partial correlations). These results partly agree with the literature. Most of the researches end up to the fact that the correlation between aspects of organizational commitment and burnout dimensions is negative (Maslach, 2003; Hakanen et al., 2006; Schaufeli et al., 2008). In Tan & Akhtar's research (1998) normative commitment had a significant, moderate, positive effect on burnout whereas affective commitment had no significant impact. On the other hand Gemlik et al. (2010) found a linear relationship between emotional exhaustion and affective commitment among 1957 health care staff in Istanbul, Turkey.

As mentioned in the results both burnout and job satisfaction are multidimensional constructs (Koustelios, 1991). Prior studies demonstrated a moderate to high association (Bhana and Haffejee, 1996; Dolan, 1987; Koeske and Kirk, 1994; Pines et al., 1980). Job satisfaction has been empirically identified as a significant work-related antecedent to burnout (Happell et al., 2003). On the other hand burnout is often cited as a source of job dissatisfaction (Aiken, 2002). These results show that sometimes there is a problem of distinction from each other. In the current research job satisfaction is confronted as a multidimensional construct with 7 subscales all of which according to the theories and empirical studies in the burnout literature are considered antecedents of burnout (support, workload, financial reward)

(Leiter & Maslach, 1999; 2005a; 2005b; Maslach & Leiter, 1997). The results indicate a moderate to strong, negative and statistically significant correlation between emotional exhaustion and satisfaction dimensions (stronger with workload, support and training) (r from -0.368 to -0.602). Depersonalization correlates in a weak way with satisfaction (r from -0.154 to -0.313), while personal accomplishment has stronger correlation (r from -0.312 to -0.679).

As discussion above job satisfaction is a controlling factor with great affection to all correlations. The correlations that become very weak to 0 are role conflict to personal accomplishment, role ambiguity to emotional exhaustion, role ambiguity to depersonalization, affective commitment to emotional exhaustion, affective commitment to depersonalization and affective commitment to personal accomplishment. These observations maybe explained from the mediation and interrelation so as to the discriminant validity in doubt between job satisfaction and burnout and must be taken into consideration in further researches.

At last multiple regression analyses indicated that best predictors of burnout in the models are (by turn of importance) role conflict, training, pay, serious family issue and workload for emotional exhaustion (R^2=0.756), role conflict, pay, serious family issue and training for depersonalization (R^2=429) and workload, nursing experience, prospects, serious family issue and role ambiguity for personal accomplishment (R^2=0.614). In Stanley's research (2006) among psychiatric nurses in Canada role conflict and workload were the best predictors of all three dimensions of burnout. Based on a sample of 625 nurses Stordeur et al. (1999) by using multiple regression analyses selected 11 predictors significantly associated with burnout. Some contributed positively to burnout including presence of stressors related to private life. In the study Queiros et al. (2013) among a sample of 1,157 participants from four hospitals in the city of Porto (Portugal) it was demonstrated that strong predictors of burnout after a multiple linear hierarchical regression were, among others, years of experience at work, job satisfaction and experience of work-home and home-work interaction.

Managerial implications and suggestions

The best predictors in the models resulted from the multiple regression analyses for all three dimensions are role conflict, role ambiguity, serious family

issue, nursing experience , satisfaction with workload, training, pay and prospects. Addressing these factors there will be an improvement in the burnout process.

It has been found that the least exhausted individual has confidence in his faculties and is able to handle the problems that emerge (Elliot et al, 1996). There is a problem to be addressed by the health care manager and that is the early recognition of burnout syndrome as a result of extended stress and disappointment. If an early recognition is achieved there will be a contribution to the growth of professionalism, to the change of organizational structures in the working environment and finally to healthcare quality in the provided services. Psychological support, even psychotherapy could be applied to ‘’high risk’’ nurses in order to share emotions and experiences. Psychiatric examination should be provided to high burnout nurses.

The nurse should be advised to place realistic objectives, learn to manage stress, to understand her/his limits. The learning of techniques of relaxation and management of time, the programs of physical exercise, as well as the techniques of consolidation of social contacts and support could help reduce stress and in extension prevent or reduce burnout.

Administrative staff and managers should take care of the directions they give to nurses. ‘’Double’’ messages with shadowy meanings produce confusion and stress. The operation management must include clarified goals, proper distribution of workload, specific assignments, dependent on the capabilities of each nurse, clear directions and feedback.

Team building strategies may be helpful, especially when there is poor support in the clinic. Participative decision making increases moral and optimism for the job. Periodical meetings of staff in a form of a team (i.e. once a month), will empower their relationships and will give the chance of suggesting solutions to the problems of the clinic.

Continuous training as for mental health issues would help a lot nurses to confront better with their everyday problems. They would feel more certain and confident on what to do with improvement on performance.

Baring in mind both organizational and personal factors that may cause stress, managers should also nurture nurses in such way that they will accept the vision of the clinic as their one. In that way both nurses, administrative staff and director of the

clinic will share common motives and interests resulting in less stress and better performance.

Conclusions

This study tried to investigate i) the prevalence of burnout among mental health nurses, ii) the relationship between burnout and organizational factors, such as role conflict, role ambiguity, organizational commitment and job satisfaction and iii) models that predict best all three dimension of burnout, emotional exhaustion, depersonalization and personal accomplishment. According to the results of the study mental health nurses present high emotional exhaustion with medium levels of depersonalization and personal accomplishment. Organizational commitment , though relating negatively to burnout doesn't contribute to its prediction. Serious family issues proved to play an important positive role to burnout. Role conflict was demonstrated to be one of the best predictors of emotional exhaustion and depersonalization, while role ambiguity was one of the best predictors of personal accomplishment. As Maslach and Leiter (1997) supported the basic idea of mismatch of the person and the work has been used as a starting point for defining critical determinants of burnout such as workload, role conflict, role ambiguity, support and financial reward, which have been investigated thoroughly in the current study and proved to be important factors related to and predicting burnout.

Limitations

Self administered questionnaires were used in order to measure organizational commitment, burnout, job satisfaction and job stressors. This is considered to be a limitation because self-report measures have a higher risk to induce self- enhancement bias (Dries and Pepermans, 2007). The research was conducted in one city (4 psychiatric clinics) and thus the findings cannot be generalized for the Industry. In addition one clinic was excluded from the population (5 clinics) due to a denial of its director. This fact prevented the author to approach all the available population and create a valid and homogeneous sample. Return rate of the questionnaires was rather

low (RR=33.6%) according to Babbie (1998) who sets a 50% of return rate as adequate. This is may be because of the nature of the questions; many nurses worried, even though were assured for the anonymity, about the chance of the answers to be revealed to their bosses. Another reason may be the gathering of the questionnaires not straight from the author but from the head nurses (supervisors in many cases) of the clinics. Job satisfaction weakened many correlations as a controller between the organizational factors. As mentioned above this is a methodological problem, although this fact was taken into account in multiple regression analyses. Relatively small numbers in some sub groups (i.e. AEI, <1 year experience, widowed), although in some cases statistically important cause methodological issue about the validity of the results.

Recommendations

A first recommendation would be a larger study with respondents from psychiatric clinics from all over Greece. That is, larger population, larger sample and findings that can be generalized for the mental health sector. Another recommendation would be the conduction of a cross-sectional study comparing burnout levels and the relation to organizational factors among private and public mental health care sector as there are many organizational differences between them. In addition, an explanatory study in mental health care sector could take place comparing burnout levels of nurses after a number of interventions in order to reduce stress is applied. A last recommendation would be a study in which burnout will be examined as predictor of burnout and in what way it predicts satisfaction's outcomes.

Reflections on learning

Within the effort to carry through the present study, the author had the opportunity to gain valuable information from past literature and expand his knowledge upon the field of Industrial Psychology in the mental health care sector. A deep and thorough examination of the factors related to burnout gives the opportunity to the author for better understanding the everyday problems in his hospital work routine, administrate the outcomes of stress of his partners (nurses & doctors) and help prevent new phenomena of burnout by applying proper interventions.

There were many difficulties that tested the author but as a result knowledge was added. More specific, a better understanding of statistical analysis, time management, improvement of communication skills, stress management, familiarization to the scientific approach, new terms and concepts, development of new ideas, are some of the benefits gained.

Conclusively, although many problems came up during the study, with personal life issues to interfere in the smooth execution of the project, one thing matters mostly: the greater the difficulty, the more the glory in surmounting it (Epicurus, 290 BC).

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Appendices

Appendix I Questionnaire

Αγαπητέ Διευθυντή,

Είμαι μεταπτυχιακός υποψήφιος στο μεταπτυχιακό πρόγραμμα Master in Business Administration του ΤΕΙ Λάρισας σε συνεργασία με το Staffordshire University. Ζητώ την άδειά σας για συμμετοχή του νοσηλευτικού προσωπικού της κλινικής σας στη μελέτη με θέμα ‘’Παράγοντες που σχετίζονται με το σύνδρομο εξουθένωσης των ψυχιατρικών νοσηλευτών στον ιδιωτικό τομέα’’. Στην έρευνα συμπεριλαμβάνονται νοσηλευτές των ιδιωτικών ψυχιατρικών κλινικών στη περιοχή της Λάρισας.

Ερευνάται η συσχέτιση της επαγγελματικής εξουθένωσης με παράγοντες όπως η σύγκρουση ρόλων, η ασάφεια ρόλων, η επαγγελματική ικανοποίηση και η οργανωσιακή δέσμευση. Τα αποτελέσματα της μελέτης θα φανούν χρήσιμα για τη διαλεύκανση των παραγόντων οι οποίοι οδηγούν προς την επαγγελματική εξουθένωση. Στην πράξη, οι διοικήσεις των ψυχιατρικών κλινικών θα μπορούν να αναγνωρίζουν πιο εύκολα τους λόγους τυχόν μειωμένης απόδοσης των νοσηλευτών και τους παράγοντες που εξουθενώνουν το προσωπικό. Δίδεται έτσι η δυνατότητα για καλύτερη διαχείριση κρίσεων αλλά και διαχείριση του ανθρώπινου δυναμικού.

Η συμμετοχή των νοσηλευτών είναι *εθελοντική* και *ανώνυμη* στην έρευνα. Για τη συμπλήρωση του ερωτηματολογίου απαιτούνται 25-35 λεπτά. Το ερωτηματολόγιο θα διανεμηθεί κατ’ιδίαν στους νοσηλευτές της κλινικής. Θα τηρηθεί αυστηρή εχεμύθεια.

Κατανοώ τον πολύτιμο και περιορισμένο χρόνο σας και θα εκτιμούσα ιδιαίτερα τη συγκατάθεσή σας στην εφαρμογή της έρευνας στη κλινική σας. Σε περίπτωση απορίων μπορείτε να επικοινωνήσετε μαζί μου στο τηλ. 6978895031 ή στο email konstadam@gmail.com. Ευχαριστώ εκ των προτέρων για το χρόνο σας και τη συμβολή σας στην έρευνα.

Ειλικρινά,

Κωνσταντίνου Αδάμος
Ειδικευόμενος ιατρός Ψυχιατρικής
Μεταπτυχιακός φοιτητής MBA
ΤΕΙ Λάρισας/ Staffordshire University

Αγαπητή νοσηλεύτρια/τή

Είμαι μεταπτυχιακός υποψήφιος στο μεταπτυχιακό πρόγραμμα Master in Business Administration του ΤΕΙ Λάρισας σε συνεργασία με το Staffordshire University. Ζητώ τη συμμετοχή σας στη μελέτη με θέμα ‘’Παράγοντες που σχετίζονται με το σύνδρομο εξουθένωσης των ψυχιατρικών νοσηλευτών στον ιδιωτικό τομέα’’. Στην έρευνα συμπεριλαμβάνονται νοσηλευτές των ιδιωτικών ψυχιατρικών κλινικών στη περιοχή της Λάρισας.

Ερευνάται η συσχέτιση της επαγγελματικής εξουθένωσης με παράγοντες όπως η σύγκρουση ρόλων, η ασάφεια ρόλων, η επαγγελματική ικανοποίηση και η οργανωσιακή δέσμευση. Τα αποτελέσματα της μελέτης θα φανούν χρήσιμα για τη διαλεύκανση των παραγόντων οι οποίοι οδηγούν προς την επαγγελματική εξουθένωση. Στην πράξη, θα μπορούν να αναγνωρίζονται πιο εύκολα λόγοι τυχόν μειωμένης απόδοσης των νοσηλευτών και παράγοντες που εξουθενώνουν το προσωπικό. Δίδεται έτσι η δυνατότητα για καλύτερη διαχείριση κρίσεων αλλά και διαχείριση του ανθρώπινου δυναμικού διαμέσου της βελτίωσης ποιότητας της εργασίας και απόδοσης κινήτρων.

Η συμμετοχή σας είναι ***εθελοντική*** και ***ανώνυμη*** στην έρευνα. Για τη συμπλήρωση του ερωτηματολογίου απαιτούνται 25-35 λεπτά. Το ερωτηματολόγιο περιλαμβάνει δημογραφικές πληροφορίες και κλίμακες για την *επαγγελματική εξουθένωση*, την *οργανωσιακή δέσμευση*, την επαγγελματική *ικανοποίηση*, τη *σύγκρουση ρόλων* και την *ασάφεια ρόλων*. Το ερωτηματολόγιο θα διανεμηθεί κατ’ιδίαν. Θα τηρηθεί αυστηρή εχεμύθεια. ***Παράκληση για συμπλήρωση του ερωτηματολόγιου εντός 10 ημερών από την παραλαβή***.

Κατανοώ τον πολύτιμο και περιορισμένο χρόνο σας και εκτιμώ ιδιαίτερα τη συνεργασία σας. Σε περίπτωση απορίων μπορείτε να επικοινωνήσετε μαζί μου στο τηλ. 6978895031 ή στο email konstadam@gmail.com. Ευχαριστώ εκ των προτέρων για το χρόνο σας και τη συμβολή σας στην έρευνα.

Ειλικρινά,

Κωνσταντίνου Αδάμος
Ειδικευόμενος ιατρός Ψυχιατρικής
Μεταπτυχιακός φοιτητής MBA
ΤΕΙ Λάρισας/ Staffordshire University

ΜΕΡΟΣ 1^{ο}

Φύλο Α Θ

Ηλικία……..

Οικογενειακή κατάσταση (σημειώστε ένα Χ στο κουτάκι):

Έγγαμη/ος ☐

Άγαμη/ος ☐

Διαζευγμένη/ος ☐

Χήρα/ος ☐

Αριθμός παιδιών……..

Εκπαίδευση (σημειώστε ένα Χ στο κουτάκι):

ΑΕΙ ☐

ΤΕΙ ☐

Διετής ☐

ΙΕΚ ☐

Επιπρόσθετες σπουδές(π.χ. μεταπτυχιακό, διδακτορικό, άλλη σχολή)……..

Εργασιακός ρόλος (σημειώστε ένα Χ στο κουτάκι):

Προϊσταμένη/ος ☐

Υπεύθυνη/ος τμήματος ☐

Νοσηλεύτρια/τής ☐

Βοηθός νοσηλευτή ☐

Χρόνια εργασιακής νοσηλευτικής εμπειρίας……

Χρόνια υπηρεσίας στην παρούσα κλινική……..

Βάρδιες στη παρούσα φάση(σημειώστε ένα Χ στο κουτάκι):

Μόνο ημέρα ☐

Ημέρα και νύχτα ☐

Αντιμετωπίζετε τη τρέχουσα χρονική περίοδο σοβαρό οικογενειακό πρόβλημα (κυκλώστε): ΝΑΙ ΟΧΙ

ΜΕΡΟΣ 2^{Ο}

Παρακάτω παρατίθεται μία σειρά δηλώσεων οι οποίες αντιπροσωπεύουν συναισθήματα που μπορεί να έχετε για την κλινική στην οποία εργάζεσθε. Σύμφωνα με τα συναισθήματά σας, παρακαλείσθε να υποδείξετε το βαθμό της συμφωνίας σας ή της διαφωνίας σας με τη κάθε δήλωση κυκλώνοντας ένα αριθμό από το 1 έως το 7 σύμφωνα με την ακόλουθη κλίμακα.

1	2	3	4	5	6	7
Σίγουρα Διαφωνώ	**Διαφωνώ**	**Μάλλον Διαφωνώ**	**Ούτε Συμφωνώ, ούτε Διαφωνώ**	**Μάλλον Συμφωνώ**	**Συμφωνώ**	**Σίγουρα Συμφωνώ**

1.	**Θα με ευχαριστούσε ιδιαίτερα να περνούσα το υπόλοιπο της καριέρας μου στη κλινική όπου εργάζομαι**	1	2	3	4	5	6	7
2.	**Πραγματικά νιώθω ότι τα προβλήματα της κλινικής είναι και δικά μου**	1	2	3	4	5	6	7
3.	**Δεν νιώθω ότι είμαι κομμάτι της κλινικής**	1	2	3	4	5	6	7
4.	**Δεν νιώθω συναισθηματικά δεμένη/ος με την κλινική**	1	2	3	4	5	6	7
5.	**Δεν νιώθω ''μέλος της οικογένειας'' της κλινικής**	1	2	3	4	5	6	7
6.	**Αυτή η κλινική έχει ιδιαίτερη σημασία για μένα**	1	2	3	4	5	6	7
7.	**Αυτή τη στιγμή, το να παραμείνω στην κλινική είναι τόσο θέμα αναγκαιότητας όσο και θέμα επιθυμίας**	1	2	3	4	5	6	7
8.	**Θα μου ήταν πολύ δύσκολο να εγκατέλειπα την κλινική τώρα, ακόμη και αν το ήθελα**	1	2	3	4	5	6	7
9.	**Η ζωή μου θα αναστατωνόταν σε μεγάλο βαθμό εάν αποφάσιζα ότι ήθελα να εγκαταλείψω τώρα την κλινική**	1	2	3	4	5	6	7
10.	**Αισθάνομαι ότι οι επιλογές μου είναι πολύ περιορισμένες αν αποφασίσω να εγκαταλείψω την κλινική**	1	2	3	4	5	6	7
11.	**Αν δεν είχα δώσει ένα μεγάλο μέρος του εαυτού μου στην κλινική, μπορεί να το σκεφτόμουν να εργασθώ αλλού**	1	2	3	4	5	6	7
12.	**Μία από τις λίγες αρνητικές συνέπειες του να εγκαταλείψω την κλινική είναι οι περιορισμένες εναλλακτικές για εργασία**	1	2	3	4	5	6	7
13.	**Δεν νιώθω καμία υποχρέωση να παραμείνω στον σημερινό μου εργοδότη**	1	2	3	4	5	6	7
14.	**Ακόμη και αν ήταν προς το συμφέρον μου, δεν νιώθω ότι θα ήταν σωστό να εγκαταλείψω την κλινική αυτή την περίοδο**	1	2	3	4	5	6	7
15.	**Θα ένιωθα ενοχές αν εγκατέλειπα τώρα την κλινική**	1	2	3	4	5	6	7
16.	**Αυτή η κλινική αξίζει την αφοσίωσή μου**	1	2	3	4	5	6	7
17.	**Δεν θα εγκατέλειπα την κλινική άμεσα επειδή νιώθω υποχρεωμένος στους ανθρώπους της**	1	2	3	4	5	6	7
18.	**Χρωστώ πάρα πολλά στην κλινική**	1	2	3	4	5	6	7

ΜΕΡΟΣ 3^{Ο}

Ακολουθεί μία σειρά δηλώσεων οι οποίες σχετίζονται με την ικανοποίηση από την εργασία σας στην κλινική. Παρακαλείσθε να υποδείξετε το βαθμό της συμφωνίας ή διαφωνίας σας με καθεμία από τις παρακάτω δηλώσεις κυκλώνοντας ένα αριθμό από το 1 έως το 7 σύμφωνα με την ακόλουθη κλίμακα.

1	2	3	4	5	6	7
Σίγουρα Διαφωνώ	**Διαφωνώ**	**Μάλλον Διαφωνώ**	**Ούτε Συμφωνώ, ούτε Διαφωνώ**	**Μάλλον Συμφωνώ**	**Συμφωνώ**	**Σίγουρα Συμφωνώ**

Είμαι ικανοποιημένη/ος με:

19. Το αίσθημα πληρότητας που παίρνω από τη δουλειά μου	**1**	**2**	**3**	**4**	**5**	**6**	**7**
20. Το βαθμό της προσωπικής ανάπτυξης και βελτίωσης που αντλώ από τη δουλειά μου	**1**	**2**	**3**	**4**	**5**	**6**	**7**
21. Το βαθμό στον οποίο η δουλειά μου ποικίλει και είναι ενδιαφέρουσα	**1**	**2**	**3**	**4**	**5**	**6**	**7**
22. Το βαθμό στον οποίο μπορώ να εκφράζομαι και να δρω ελεύθερα στη δουλειά μου	**1**	**2**	**3**	**4**	**5**	**6**	**7**
23. Το βαθμό στον οποίο μπορώ να χρησιμοποιώ τις ικανότητές μου	**1**	**2**	**3**	**4**	**5**	**6**	**7**
24. Τη συχνότητα των προκλήσεων στη δουλειά μου	**1**	**2**	**3**	**4**	**5**	**6**	**7**
25. Το διαθέσιμο χρόνο για να φέρω εις πέρας την εργασία μου	**1**	**2**	**3**	**4**	**5**	**6**	**7**
26. Το πόσο χρόνο ξοδεύω στο κομμάτι της διοίκησης και της διαχείρισης καταστάσεων	**1**	**2**	**3**	**4**	**5**	**6**	**7**
27. Το φόρτο εργασίας	**1**	**2**	**3**	**4**	**5**	**6**	**7**
28. Όλα τα επίπεδα στελέχωσης (ιατροί, νοσηλευτές, διοικητικοί, φυσικοθεραπευτές κλπ)	**1**	**2**	**3**	**4**	**5**	**6**	**7**
29. Το πόσο χρόνο έχω διαθέσιμο να τελειώσω ότι έχω να κάνω	**1**	**2**	**3**	**4**	**5**	**6**	**7**
30. Το τι έχω εκπληρώσει όταν πηγαίνω σπίτι στο τέλος της μέρας	**1**	**2**	**3**	**4**	**5**	**6**	**7**
31. Τις ώρες που δουλεύω	**1**	**2**	**3**	**4**	**5**	**6**	**7**
32. Το διαθέσιμο χρόνο για τη φροντίδα των ασθενών	**1**	**2**	**3**	**4**	**5**	**6**	**7**
33. Το βαθμό στον οποίο νιώθω μέλος μιας ομάδας	**1**	**2**	**3**	**4**	**5**	**6**	**7**
34. Τις ευκαιρίες που έχω για να συζητήσω τους προβληματισμούς μου	**1**	**2**	**3**	**4**	**5**	**6**	**7**
35. Το βαθμό της υποστήριξης και της καθοδήγησης που λαμβάνω	**1**	**2**	**3**	**4**	**5**	**6**	**7**
36. Τους ανθρώπους που συναναστρέφομαι και συνεργάζομαι	**1**	**2**	**3**	**4**	**5**	**6**	**7**

37. Το βαθμό σεβασμού και δίκαιης μεταχείρισης που λαμβάνω από το αφεντικό μου	1	2	3	4	5	6	7
38. Τη διαθέσιμη υποστήριξη πάνω στη δουλειά μου	1	2	3	4	5	6	7
39. Τη συνολική ποιότητα επίβλεψης που ασκείται στη δουλειά μου	1	2	3	4	5	6	7
40. Την επαφή που έχω με τους συναδέλφους μου	1	2	3	4	5	6	7
41. Τη χρηματοδότηση των σεμιναρίων	1	2	3	4	5	6	7
42. Τις ευκαιρίες που έχω για πρόοδο στην καριέρα μου	1	2	3	4	5	6	7
43. Το βαθμό στον οποίο λαμβάνω επαρκή εκπαίδευση πάνω σε αυτό που κάνω	1	2	3	4	5	6	7
44. Τα ρεπό για νοσηλευτική εκπαίδευση	1	2	3	4	5	6	7
45. Τη δυνατότητα να παρακολουθώ μαθήματα/σεμινάρια	1	2	3	4	5	6	7
46. Την πληρωμή για τις ώρες που δουλεύω	1	2	3	4	5	6	7
47. Την κλίμακα πληρωμών (3ετίες, πτυχίο κλπ)	1	2	3	4	5	6	7
48. Το βαθμό στον οποίο πληρώνομαι δίκαια και σύμφωνα με τη συνεισφορά μου στην κλινική	1	2	3	4	5	6	7
49. Το ποσό της πληρωμής που λαμβάνω	1	2	3	4	5	6	7
50. Τις προοπτικές προαγωγής	1	2	3	4	5	6	7
51. Την προοπτική να συνεχίζω να εργάζομαι στην κλινική	1	2	3	4	5	6	7
52. Το βαθμό ασφάλειας για τη δουλειά μου (την πιθανότητα να κρατήσω ή όχι τη δουλειά)	1	2	3	4	5	6	7
53. Τις πιθανότητες για καριέρα στον τομέα μου	1	2	3	4	5	6	7
54. Την άποψη που επικρατεί για τους ψυχιατρικούς νοσηλευτές	1	2	3	4	5	6	7
55. Το πόσο ασφαλή και ευοίωνα δείχνουν τα πράγματα όσον αφορά το μέλλον μου στην κλινική	1	2	3	4	5	6	7
56. Την ποιότητα εργασίας με τους ασθενείς	1	2	3	4	5	6	7
57. Το επίπεδο της φροντίδας που παρέχεται στους ασθενείς	1	2	3	4	5	6	7
58. Τον τρόπο με τον οποίο λαμβάνουν φροντίδα οι ασθενείς	1	2	3	4	5	6	7
59. Το επίπεδο της φροντίδας το οποίο είμαι προς το παρών ικανή/ός να δώσω	1	2	3	4	5	6	7
60. Το γενικό επίπεδο νοσηλείας που προσφέρεται στην κλινική	1	2	3	4	5	6	7
61. Το βαθμό στον οποίο οι ασθενείς λαμβάνουν τη φροντίδα που έχουν ανάγκη	1	2	3	4	5	6	7

ΜΕΡΟΣ 4^{Ο}

Παρακάτω παρατίθεται μία σειρά δηλώσεων οι οποίες σχετίζονται με αντικρουόμενες προσδοκίες για τη συμπεριφορά σας στη δουλειά από τον οικογενειακό και εργασιακό περίγυρό σας (σύγκρουση ρόλων) καθώς και με την αβεβαιότητα που βιώνεται όταν δεν γνωρίζετε τις απαιτήσεις της εργασίας σας, με ποιο τρόπο θα τις επιτύχετε και πως αναμένουν οι άλλοι να συμπεριφερθείτε στην εργασία (ασάφεια ρόλων). Παρακαλείσθε να υποδείξετε το μέγεθος με το οποίο κάθε δήλωση αντιπροσωπεύει τον εργασιακό σας ρόλο κυκλώνοντας ένα αριθμό από το 1 έως το 7 σύμφωνα με την ακόλουθη κλίμακα.

1	2	3	4	5	6	7
Απόλυτα Ψευδές	**Ψευδές**	**Κάπως Ψευδές**	**Ουδέτερη/ος**	**Κάπως Αληθές**	**Αληθές**	**Απόλυτα Αληθές**

62. Νιώθω βέβαιη/ος για το πόση εξουσία κατέχω	**1**	**2**	**3**	**4**	**5**	**6**	**7**
63. Στη δουλειά μου υπάρχει οργάνωση και ξεκάθαροι στόχοι	**1**	**2**	**3**	**4**	**5**	**6**	**7**
64. Γνωρίζω ότι κατανέμω το χρόνο μου σωστά	**1**	**2**	**3**	**4**	**5**	**6**	**7**
65. Γνωρίζω τις ευθύνες που μου αναλογούν	**1**	**2**	**3**	**4**	**5**	**6**	**7**
66. Ξέρω ακριβώς τι αναμένουν οι άλλοι από εμένα	**1**	**2**	**3**	**4**	**5**	**6**	**7**
67. Οι εξηγήσεις που μου δίνονται είναι σαφείς για το τι πρέπει να γίνει	**1**	**2**	**3**	**4**	**5**	**6**	**7**
68. Πρέπει να κάνω πράγματα με τρόπο διαφορετικό από τον ενδεδειγμένο	**1**	**2**	**3**	**4**	**5**	**6**	**7**
69. Μου ανατίθεται ένα έργο χωρίς να έχω τον απαιτούμενο αριθμό συναδέλφων για την ολοκλήρωσή του	**1**	**2**	**3**	**4**	**5**	**6**	**7**
70. Αναγκάζομαι να παραβλέψω/ανατρέψω έναν κανόνα ή μία πολιτική έτσι ώστε να φέρω εις πέρας μία εργασία	**1**	**2**	**3**	**4**	**5**	**6**	**7**
71. Δουλεύω με δύο ή περισσότερες ομάδες που λειτουργούν εντελώς διαφορετικά	**1**	**2**	**3**	**4**	**5**	**6**	**7**
72. Λαμβάνω αντικρουόμενες εντολές από δύο ή περισσότερα άτομα	**1**	**2**	**3**	**4**	**5**	**6**	**7**
73. Κάνω πράγματα που γίνονται αποδεκτά από ένα άτομο αλλά όχι από όλους	**1**	**2**	**3**	**4**	**5**	**6**	**7**
74. Μου ανατίθεται μια εργασία χωρίς επαρκείς πόρους και υλικά για να την φέρω εις πέρας	**1**	**2**	**3**	**4**	**5**	**6**	**7**
75. **Απασχολούμαι με ανούσια πράγματα**	**1**	**2**	**3**	**4**	**5**	**6**	**7**

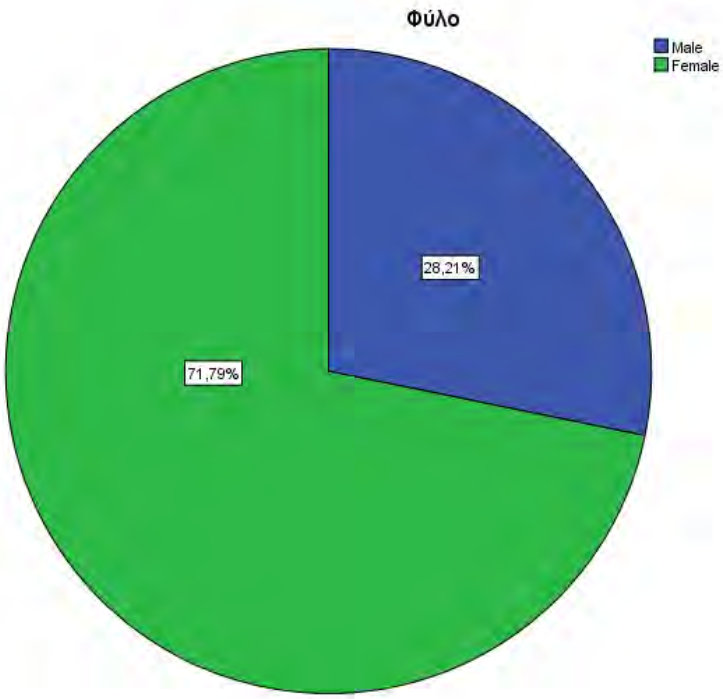
ΜΕΡΟΣ 5^{Ο}

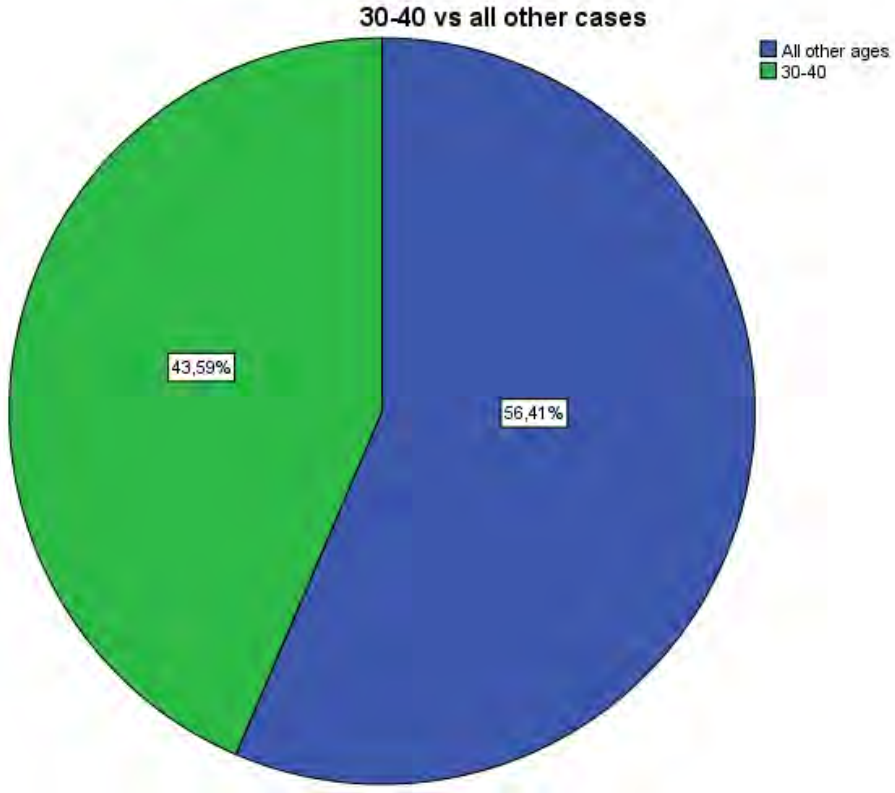
Παρακάτω παρατίθεται μία σειρά δηλώσεων οι οποίες αντιπροσωπεύουν συναισθήματα που μπορεί να έχετε για την κλινική στην οποία εργάζεσθε και σχετίζονται με την επαγγελματική εξουθένωση. Παρακαλείσθε να υποδείξετε πόσο συχνά αισθάνεστε ότι αντιμετωπίζετε τις ακόλουθες καταστάσεις κυκλώνοντας ένα αριθμό από το 0 έως το 6 σύμφωνα με την ακόλουθη κλίμακα.

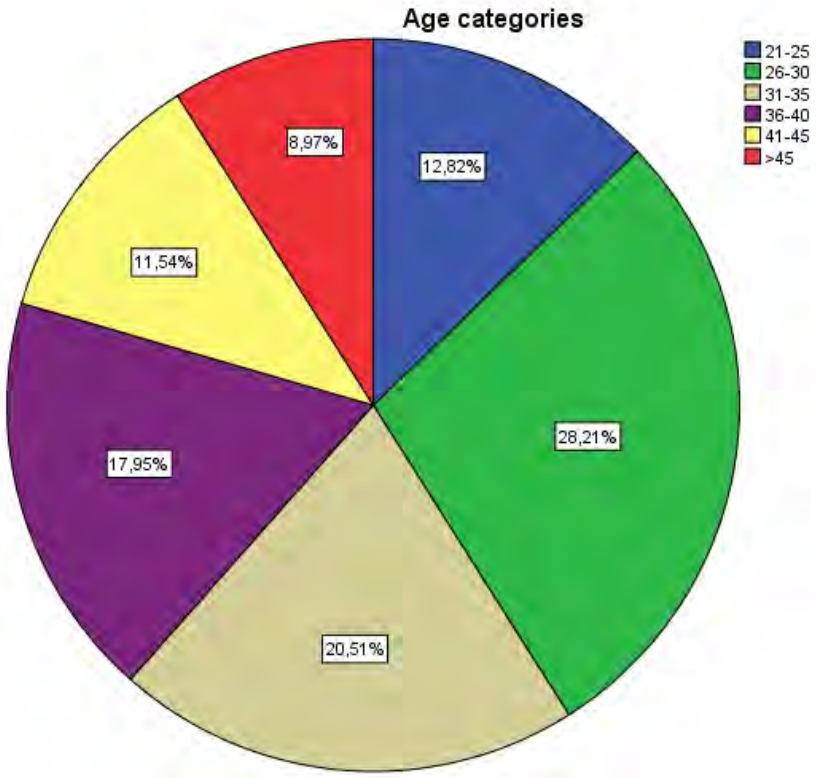
0 Ποτέ	1 Λίγες φορές ετησίως ή και λιγότερο	2 Μία φορά το μήνα ή λιγότερο	3 Λίγες φορές το μήνα	4 Μία φορά την εβδομάδα	5 Λίγες φορές την εβδομάδα	6 Κάθε μέρα

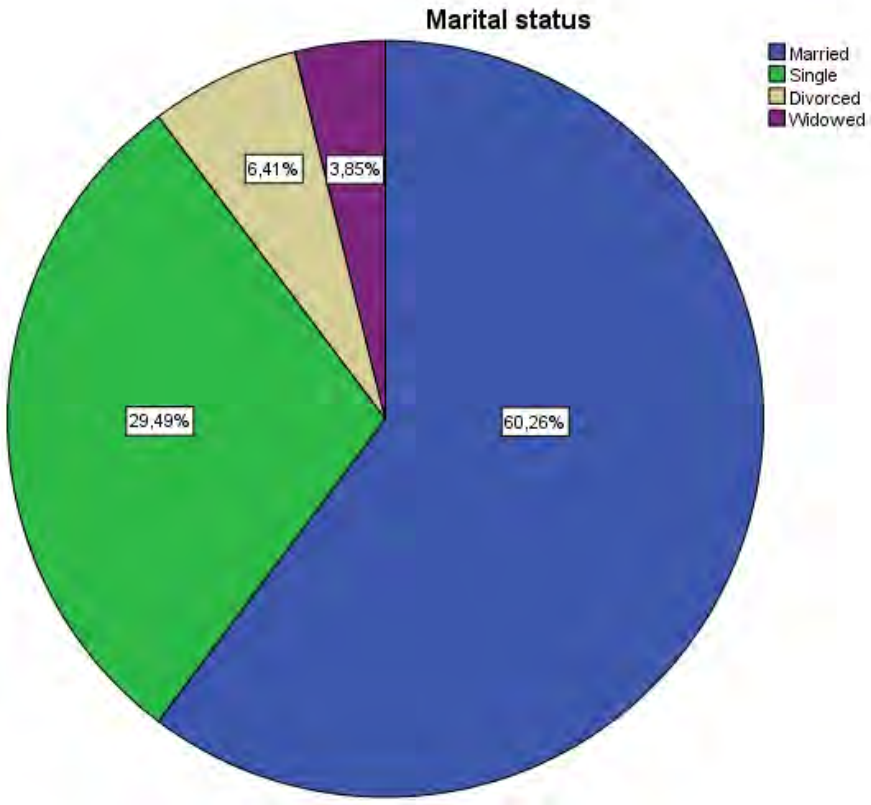
76. Νιώθω ψυχικά εξαντλημένη/ος από τη δουλειά μου	0	1	2	3	4	5	6
77. Νιώθω κουρασμένη/ος όταν ξυπνάω το πρωί και έχω να αντιμετωπίσω ακόμα μια μέρα στη δουλειά	0	1	2	3	4	5	6
78. Νιώθω άδεια/ος σα να μην έχει μείνει τίποτα μέσα μου, την ώρα που σχολάω από τη δουλειά	0	1	2	3	4	5	6
79. Μου είναι πολύ κουραστικό να δουλεύω με ανθρώπους όλη τη μέρα	0	1	2	3	4	5	6
80. Νιώθω εξουθενωμένη/ος από τη δουλειά μου	0	1	2	3	4	5	6
81. Νιώθω απογοητευμένη/ος από τη δουλειά μου	0	1	2	3	4	5	6
82. Πιστεύω ότι εργάζομαι υπερβολικά σκληρά στη δουλειά μου	0	1	2	3	4	5	6
83. Μου δημιουργεί μεγάλη ένταση το να βρίσκομαι σε άμεση επαφή με άλλους ανθρώπους	0	1	2	3	4	5	6
84. Νιώθω ότι δεν αντέχω άλλο πια..., νιώθω πως ο κόμπος έφτασε στο χτένι	0	1	2	3	4	5	6
85. Νιώθω ότι συμπεριφέρομαι απρόσωπα σε μερικούς ασθενείς σαν να ήταν αντικείμενα	0	1	2	3	4	5	6
86. Νιώθω λιγότερο ευαίσθητη/ος προς τους ανθρώπους από τότε που άρχισα αυτή τη δουλειά	0	1	2	3	4	5	6
87. Με προβληματίζει ότι σιγά-σιγά αυτή η δουλειά με κάνει συναισθηματικά πιο σκληρό	0	1	2	3	4	5	6
88. Στην ουσία, δεν μ' ενδιαφέρει τι συμβαίνει σε μερικούς ασθενείς μου	0	1	2	3	4	5	6
89. Νομίζω ότι οι ασθενείς επιρρίπτουν σε μένα ευθύνες για μερικά από τα προβλήματά τους	0	1	2	3	4	5	6
90. Μπορώ εύκολα να καταλάβω πώς νιώθουν οι ασθενείς για όσα τους συμβαίνουν	0	1	2	3	4	5	6
91. Διαχειρίζομαι πολύ αποτελεσματικά τα προβλήματα των ασθενών μου	0	1	2	3	4	5	6
92. Νιώθω ότι επηρεάζω θετικά τη ζωή των ασθενών μέσα από τη δουλειά μου	0	1	2	3	4	5	6
93. Νιώθω γεμάτη/ος δύναμη και ενεργητικότητα	0	1	2	3	4	5	6
94. Μπορώ να δημιουργώ μια άνετη ατμόσφαιρα με τους ασθενείς μου	0	1	2	3	4	5	6
95. Στο τέλος της μέρας, έχω καλή διάθεση που δούλεψα στενά με τους ασθενείς μου	0	1	2	3	4	5	6
96. Νιώθω ότι έχω καταφέρει πολλά αξιόλογα πράγματα σ' αυτή τη δουλειά	0	1	2	3	4	5	6
97. Αντιμετωπίζω πολύ ήρεμα τα προβλήματα που προκύπτουν στη δουλειά μου	0	1	2	3	4	5	6

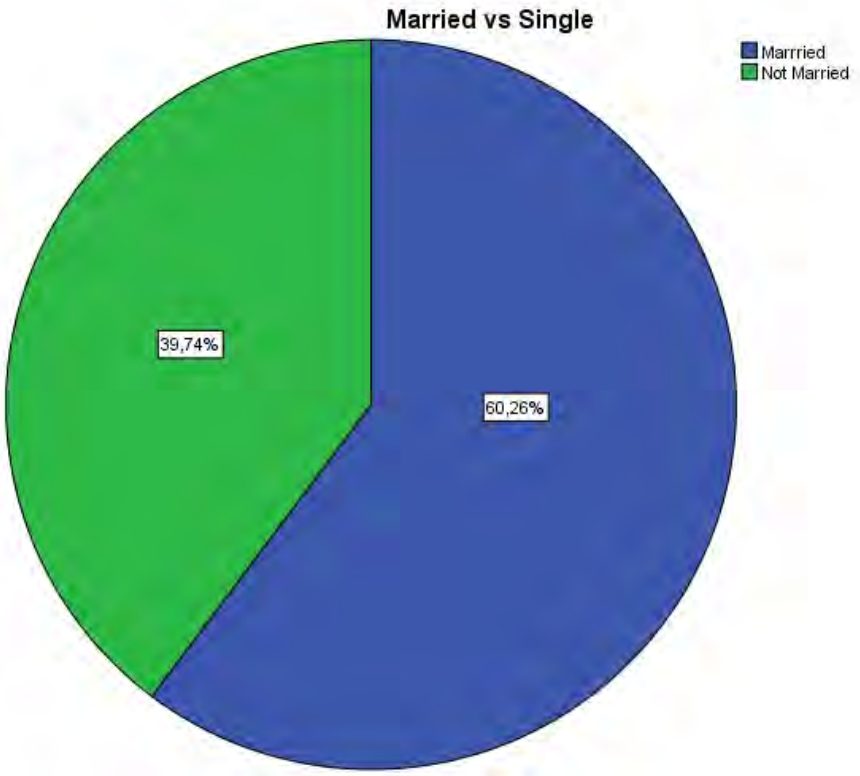
Appendix II: Frequency pie charts (percentages)

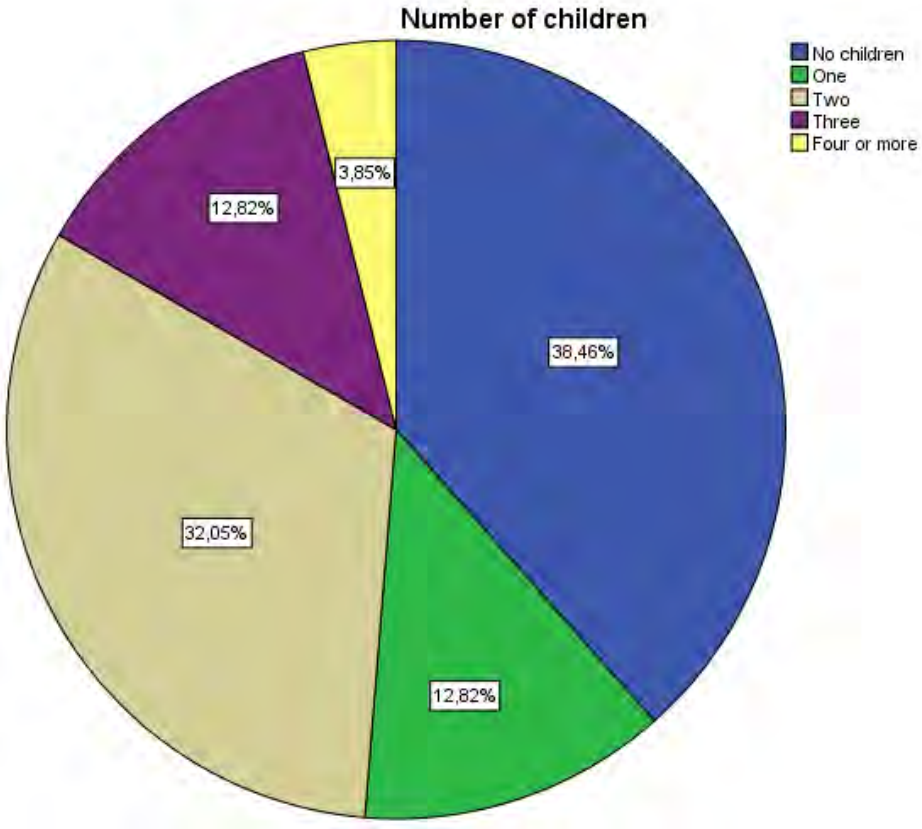


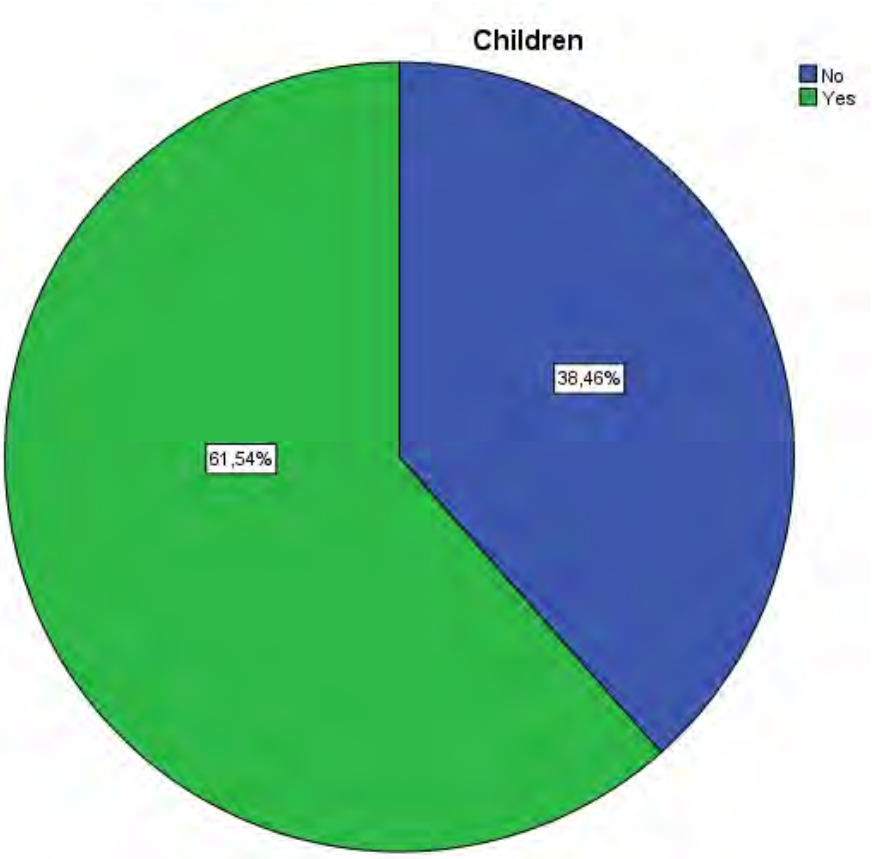


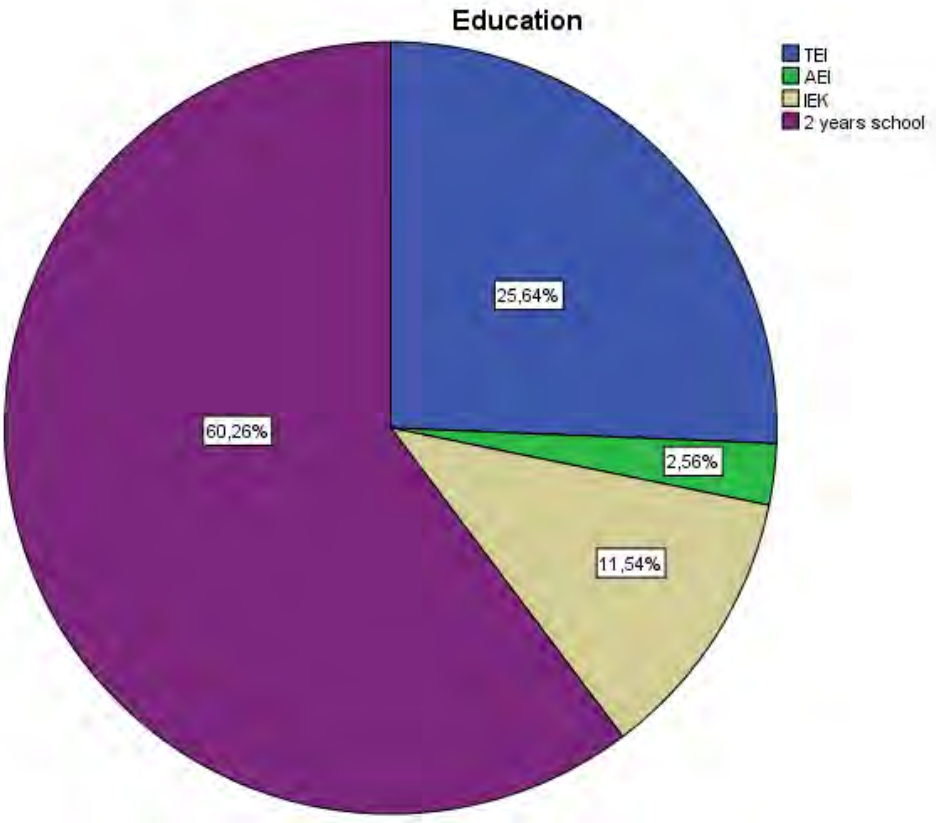


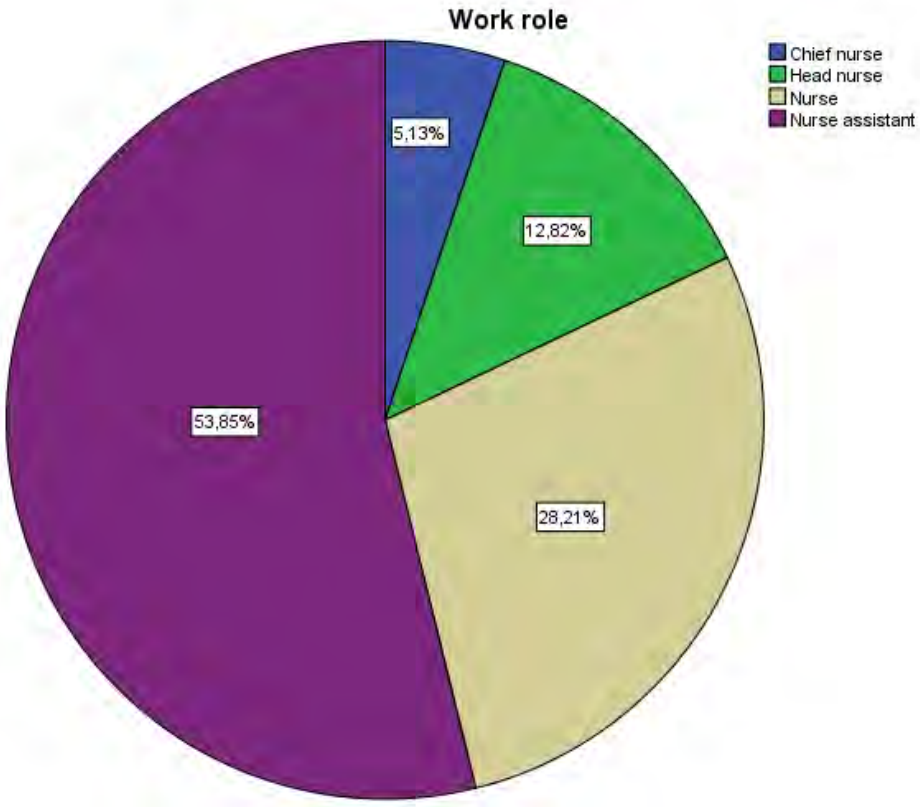


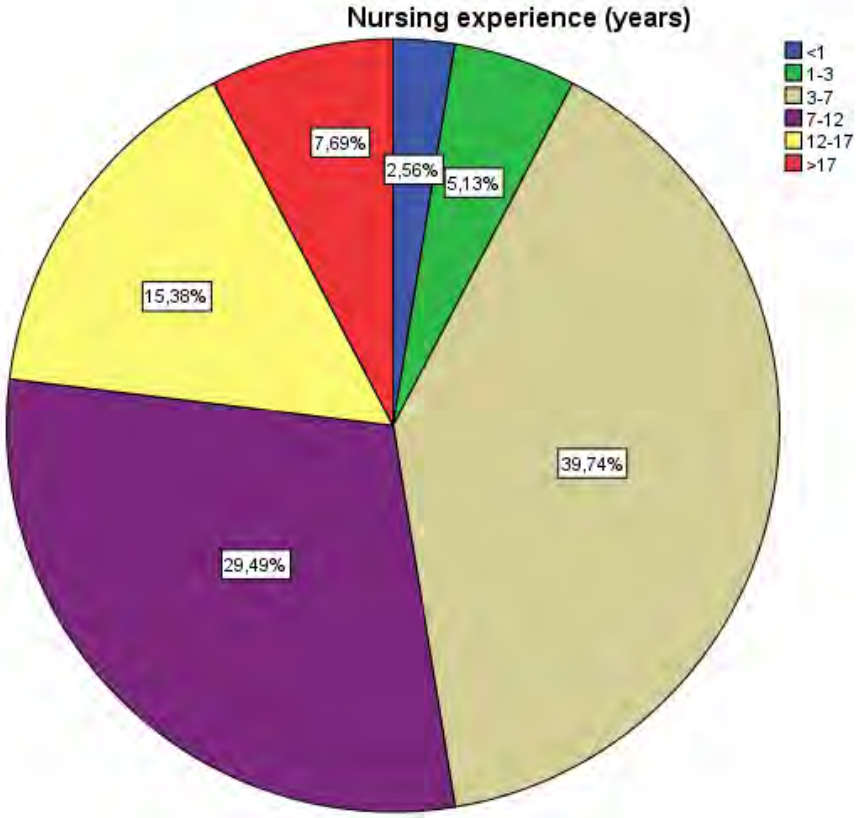


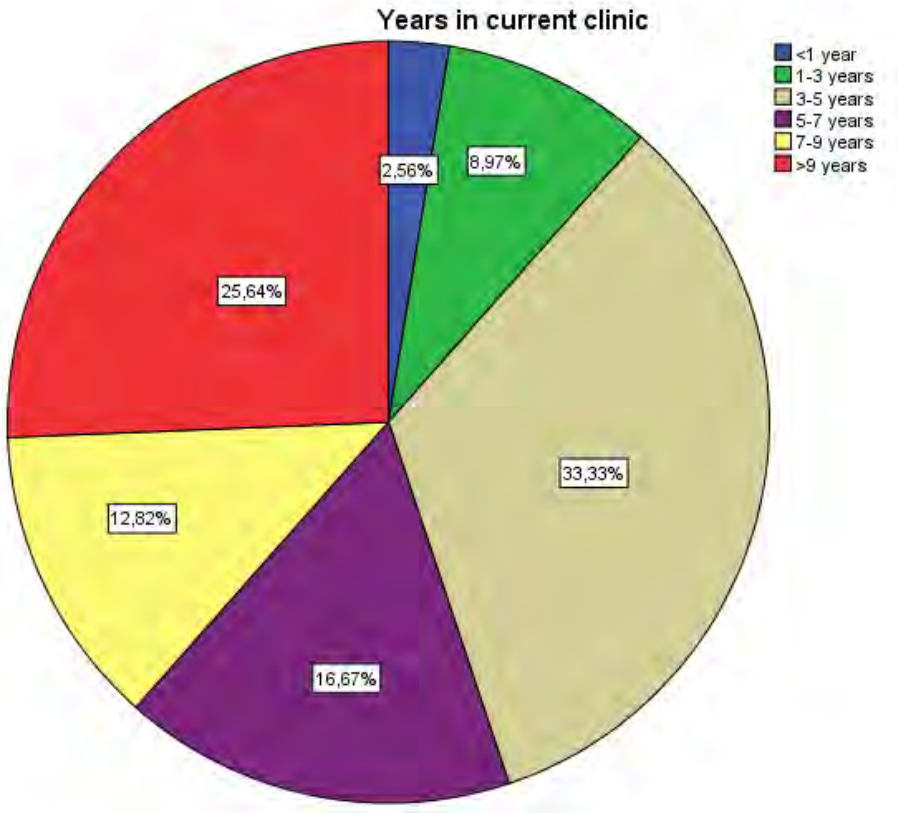


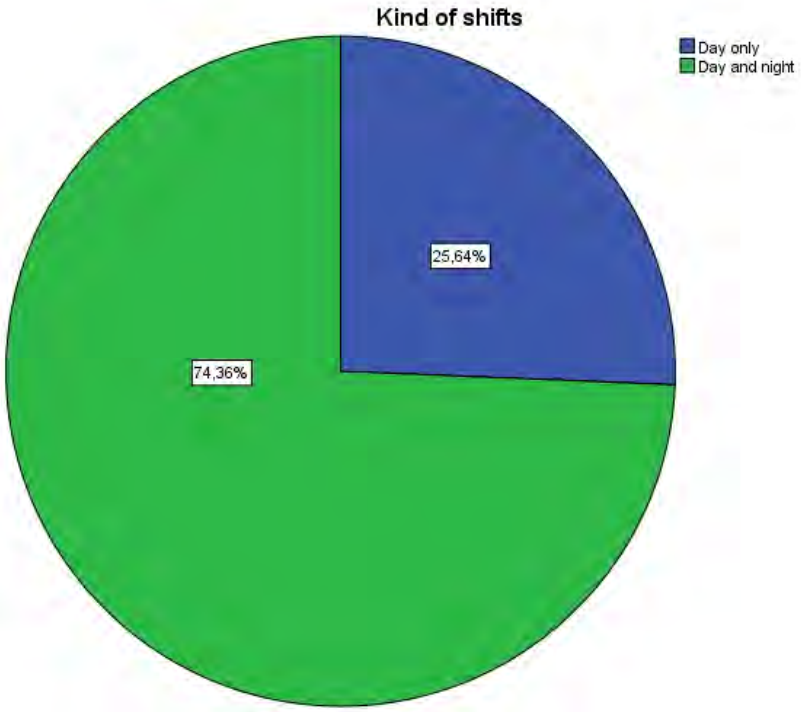


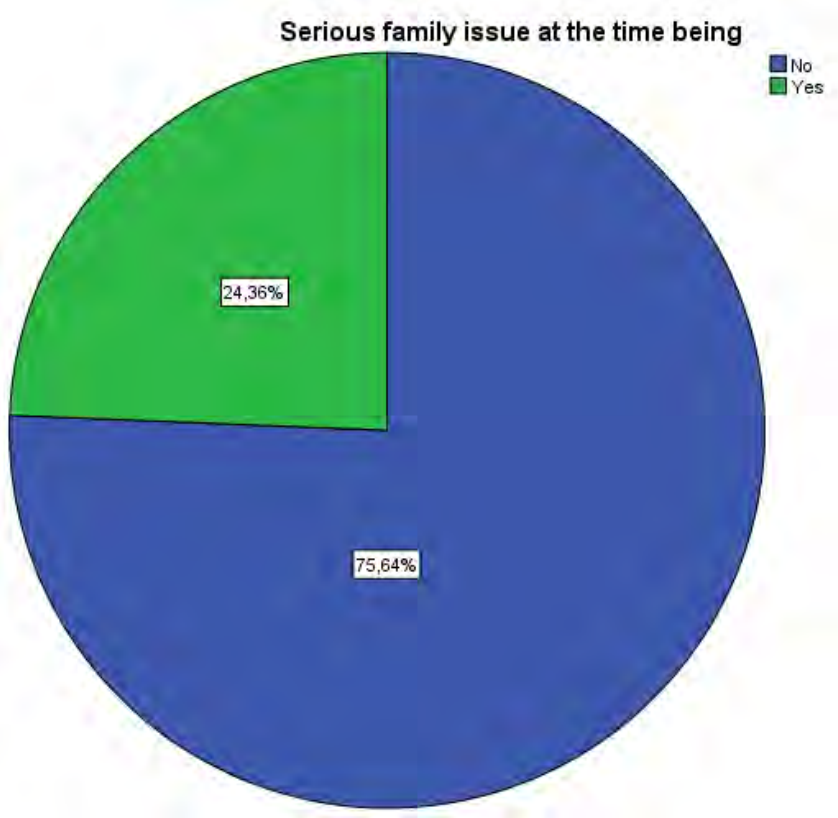


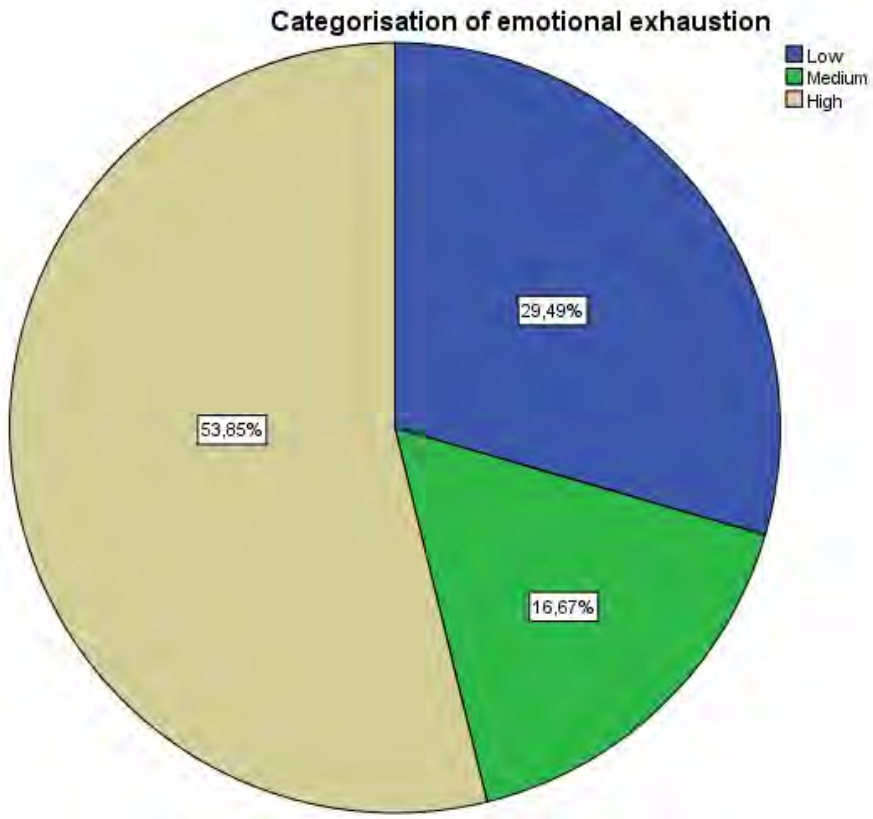


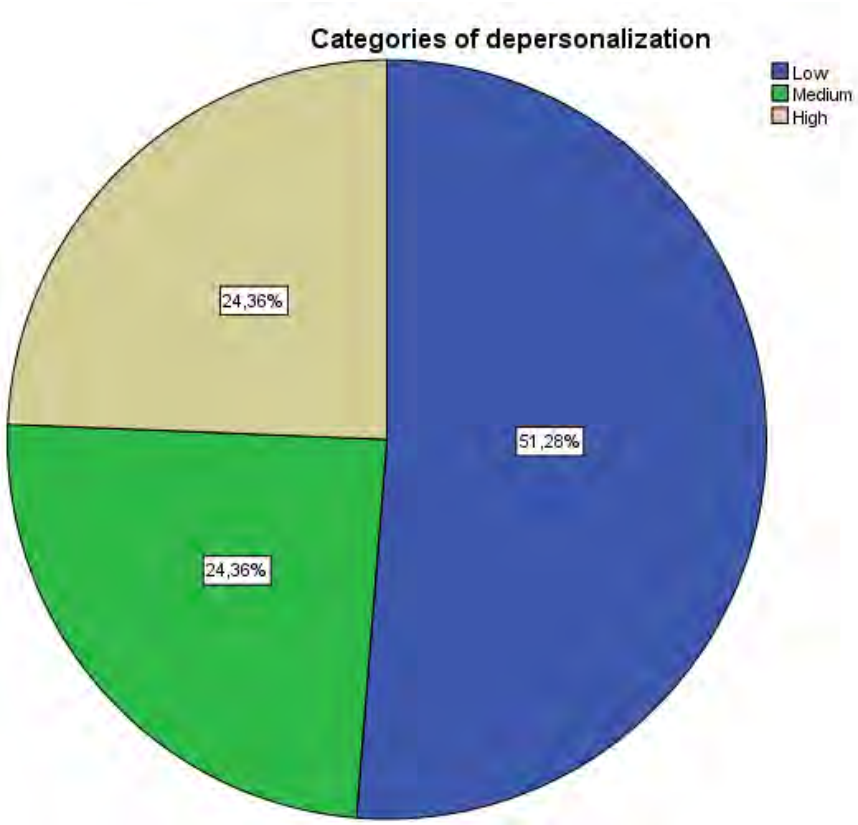


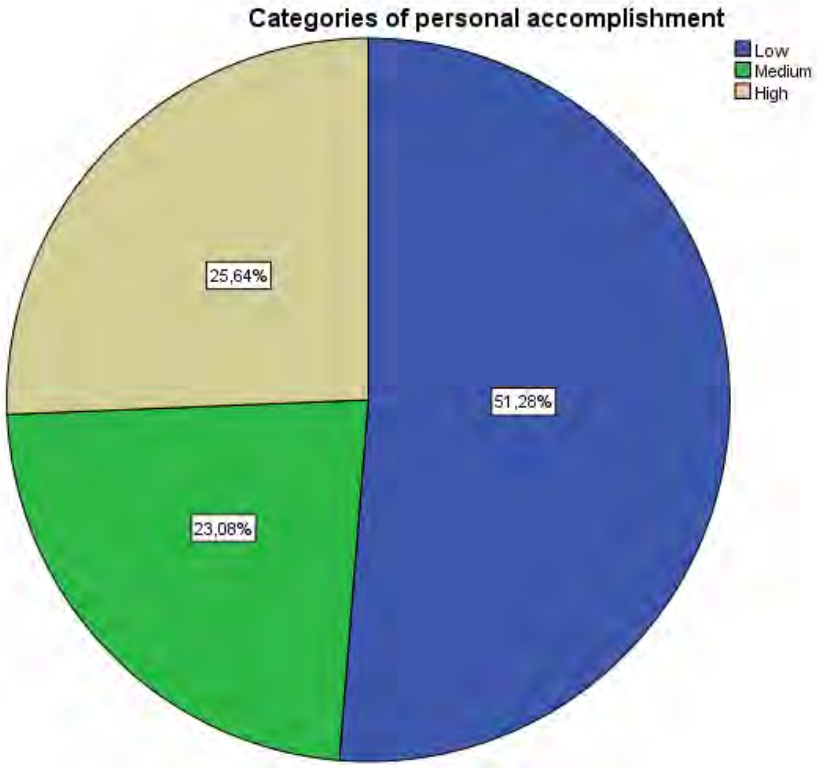




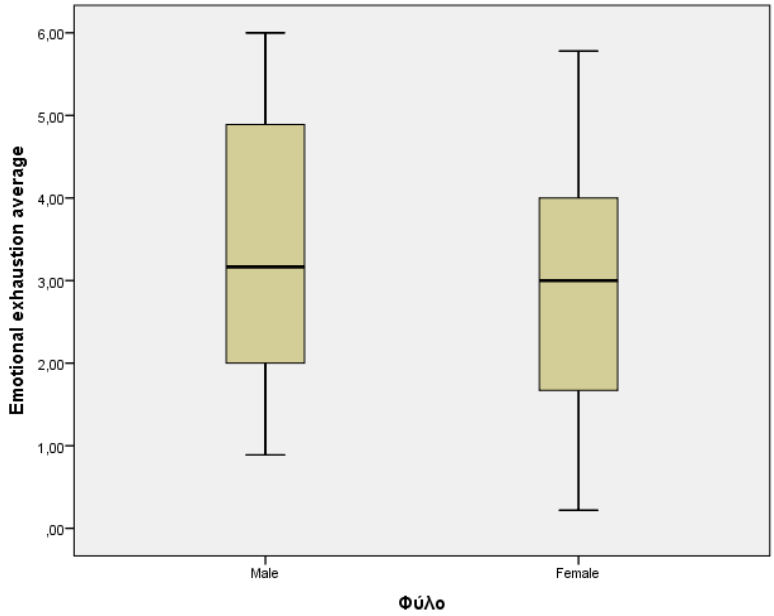


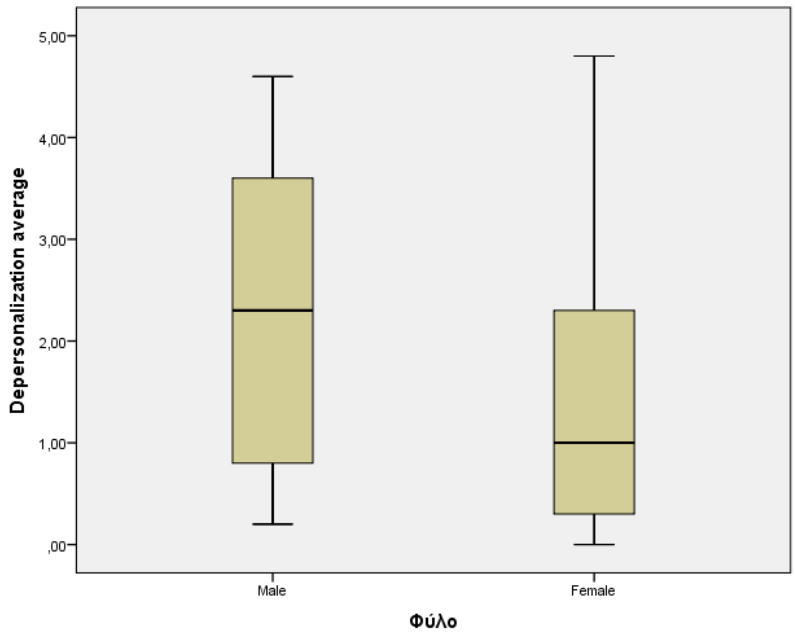


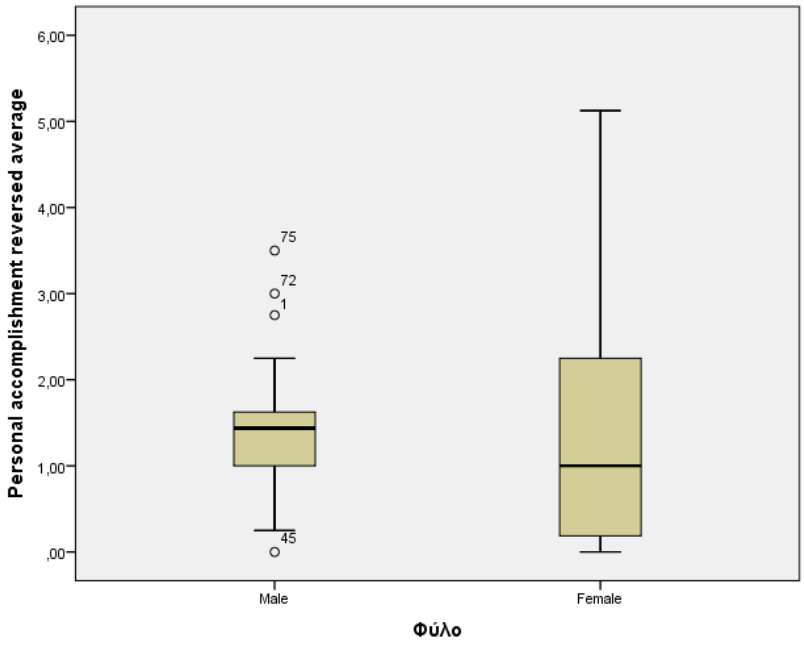




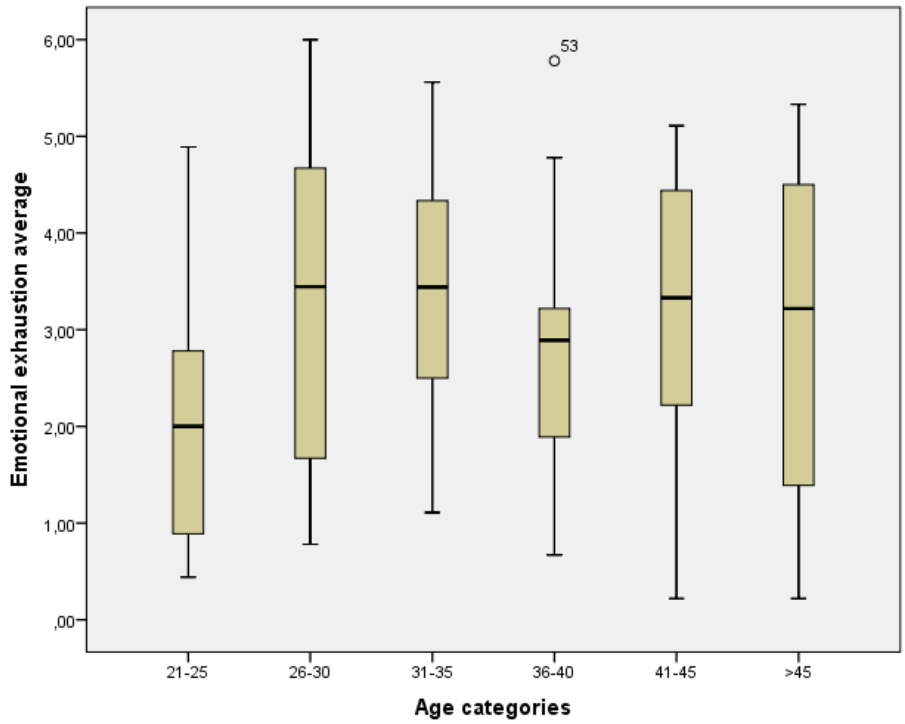
Appendix III Box plots

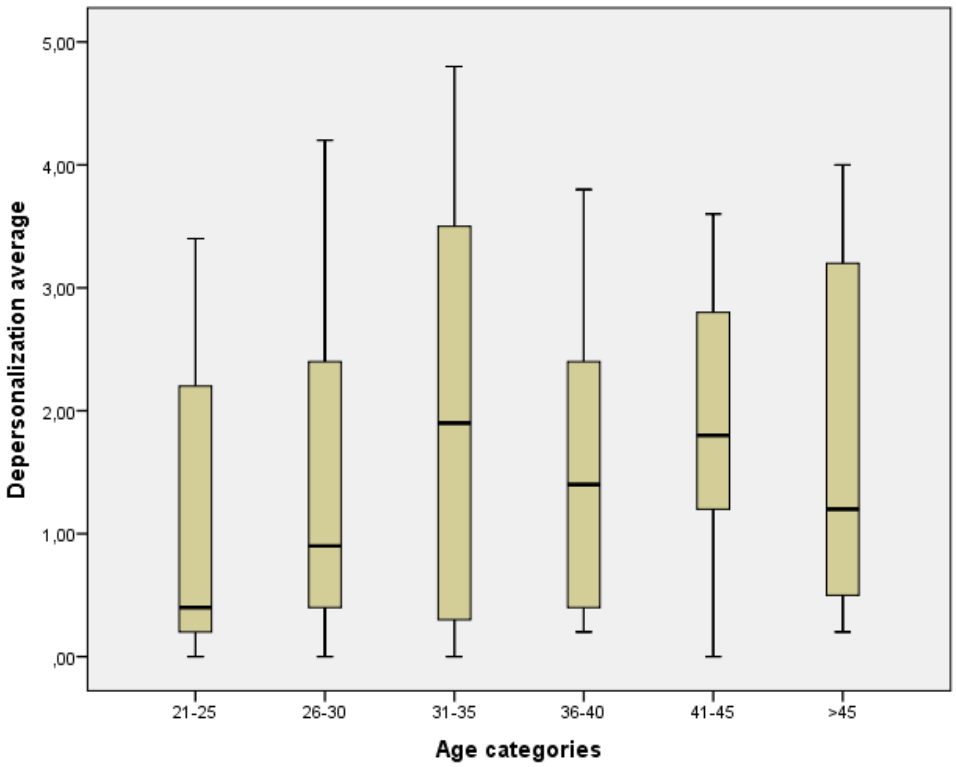


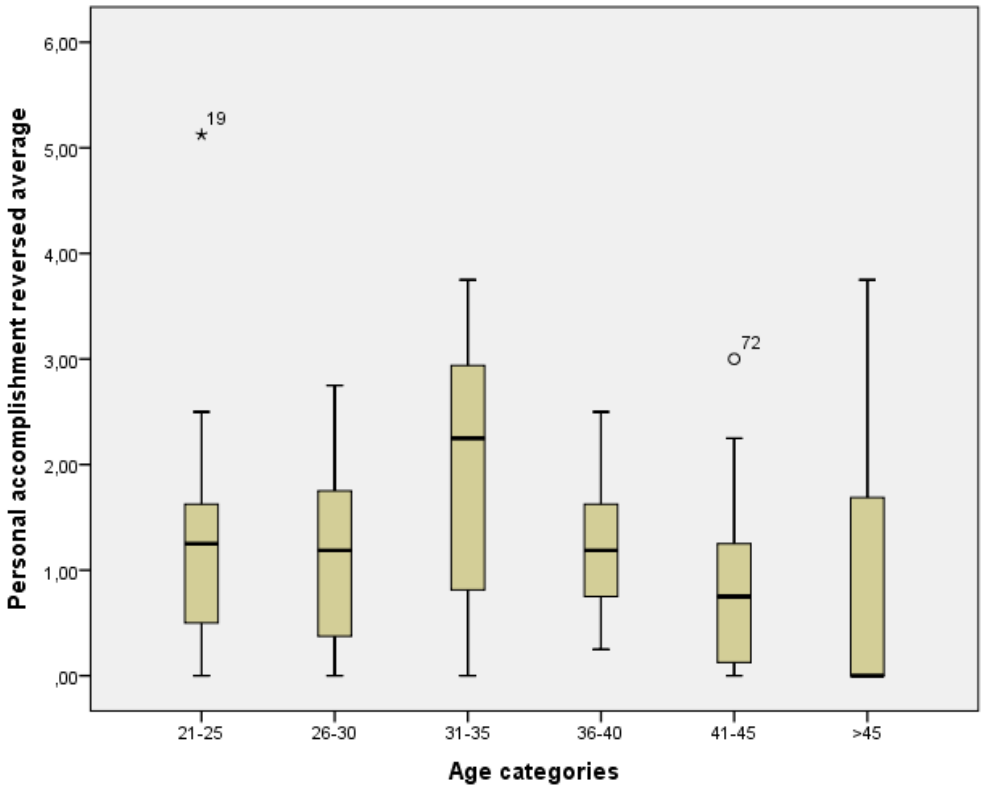




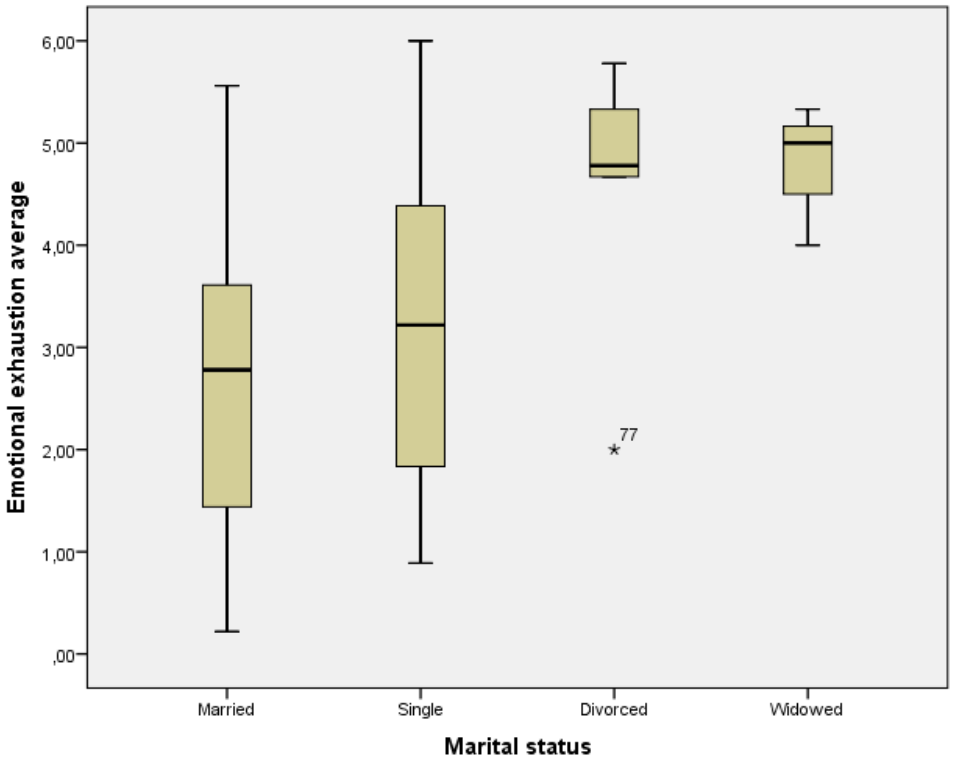
Appendix IV Box plots

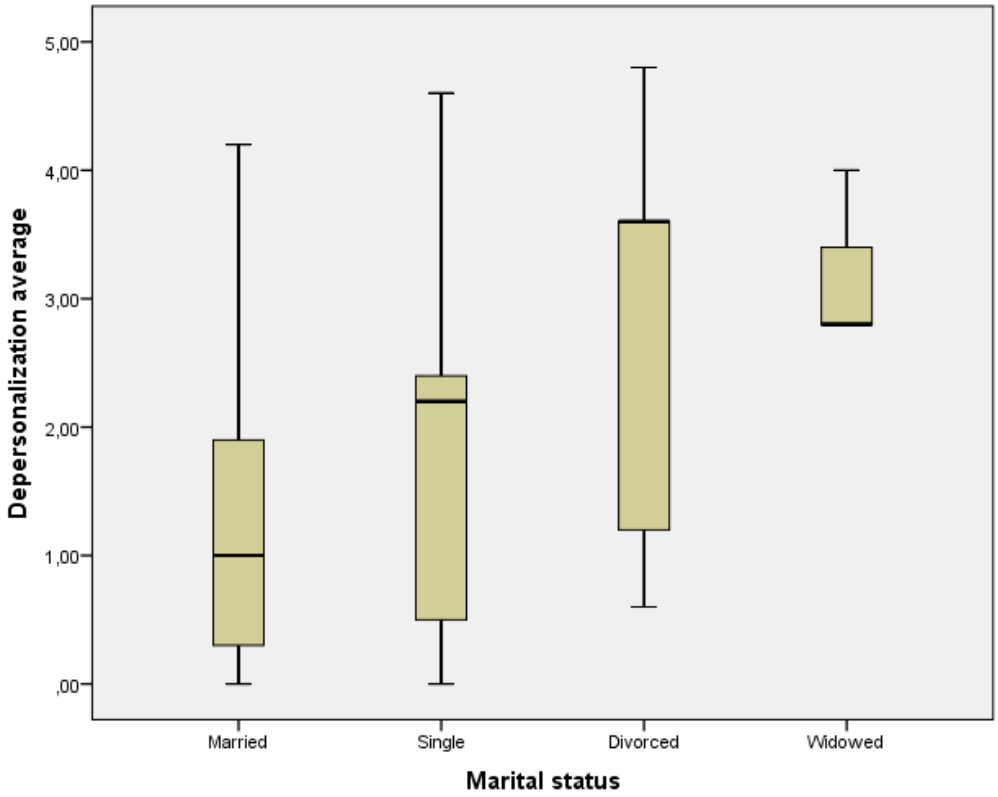


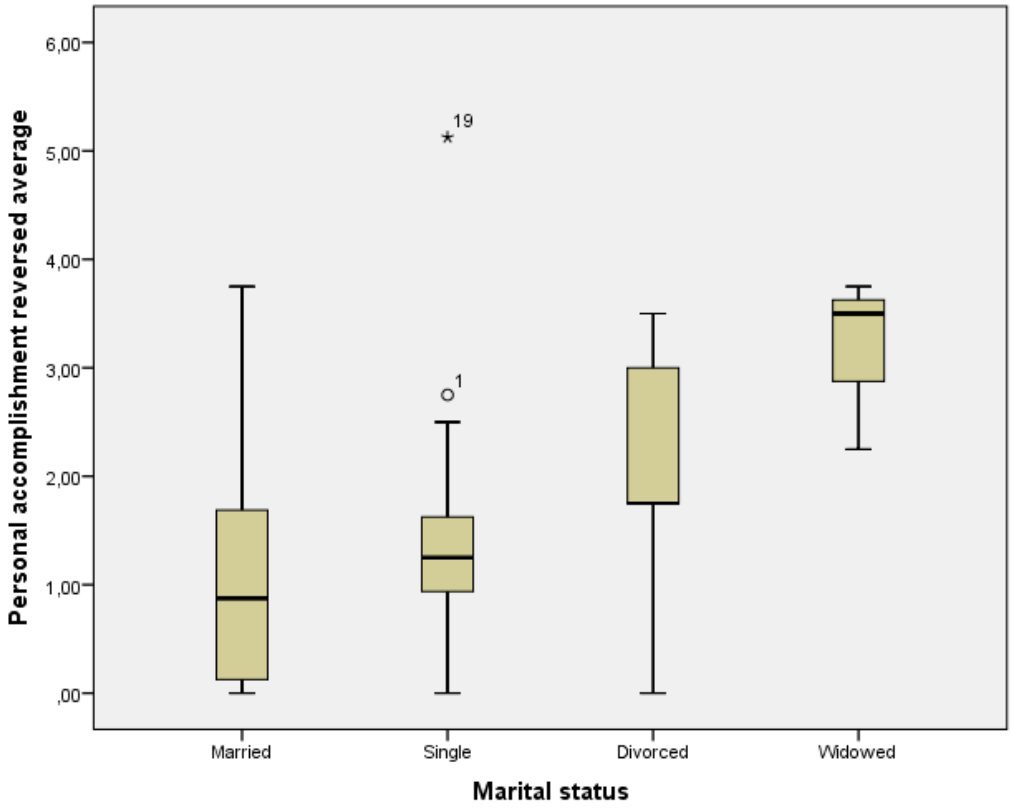




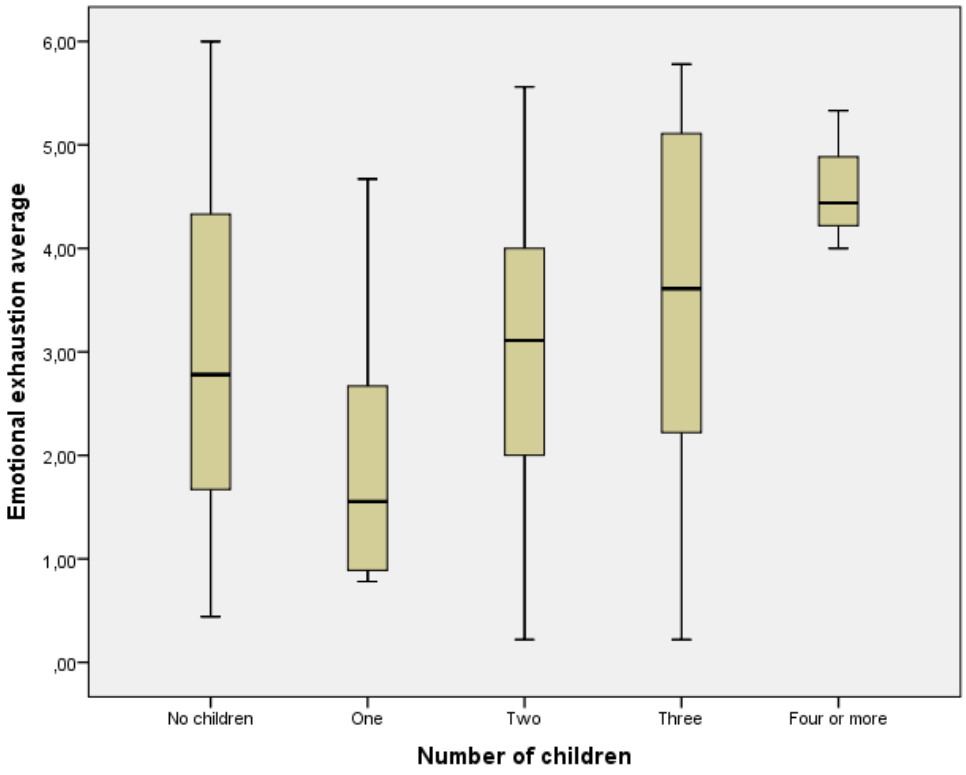
Appendix V Box plots

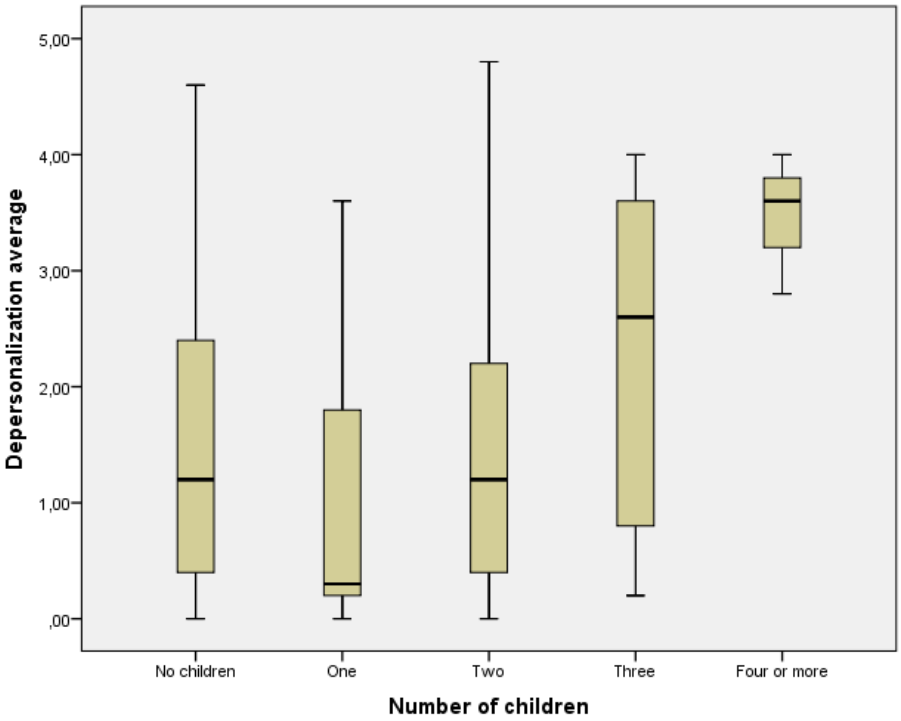


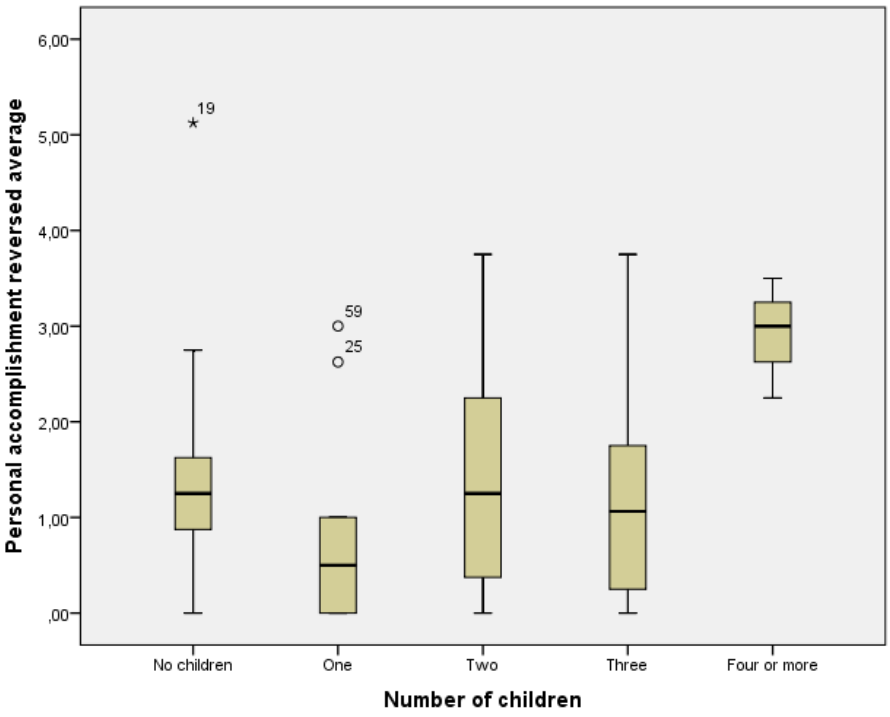




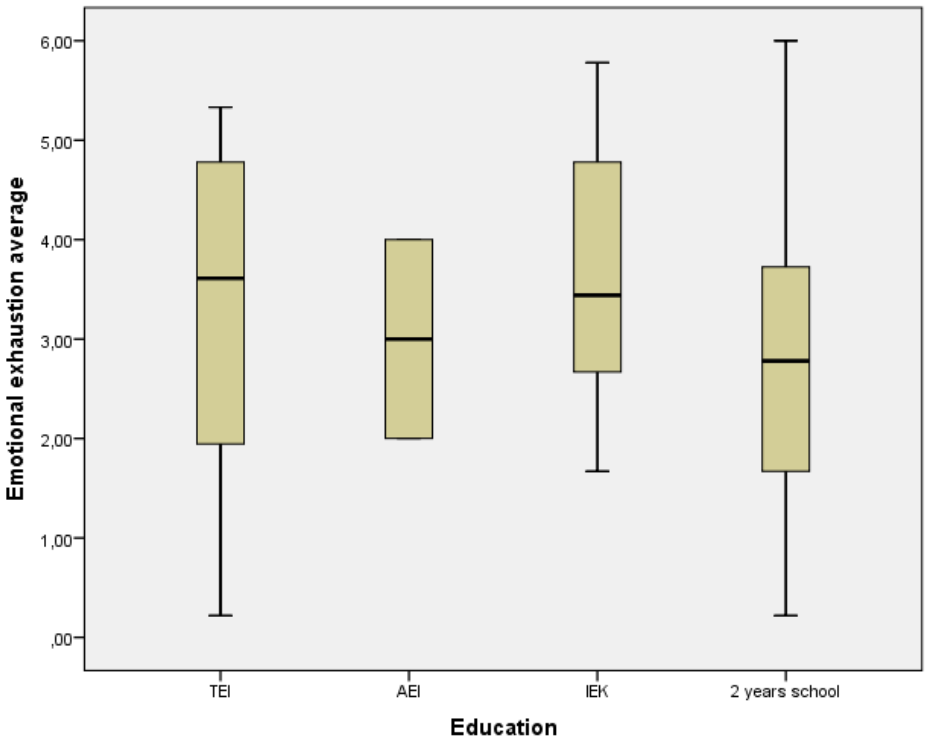
Appendix VI Box plots

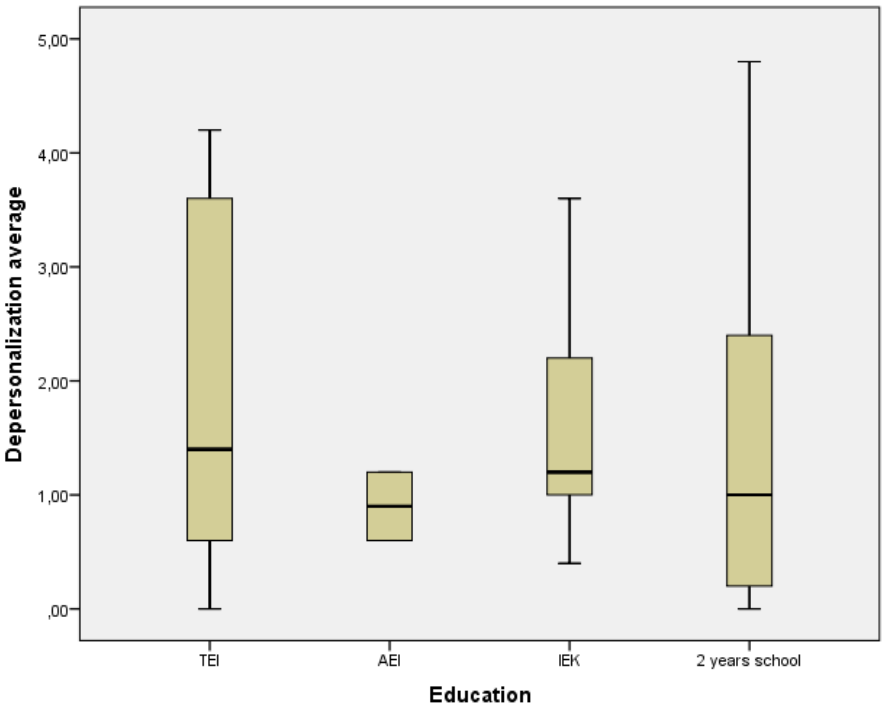


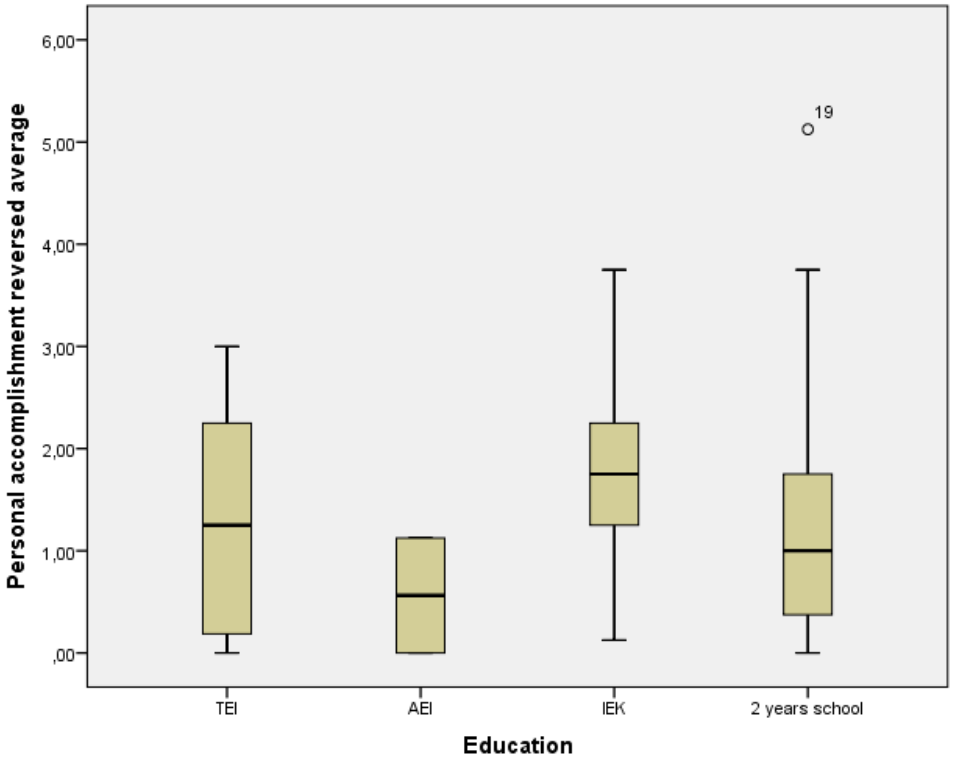




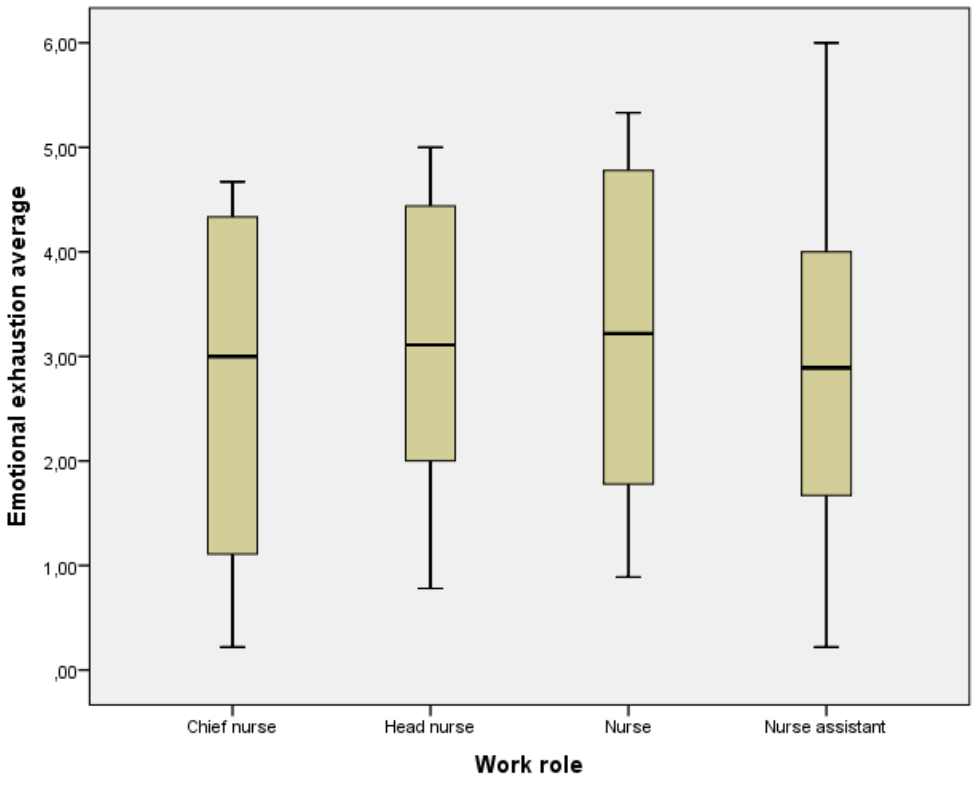
Appendix VII Box plots

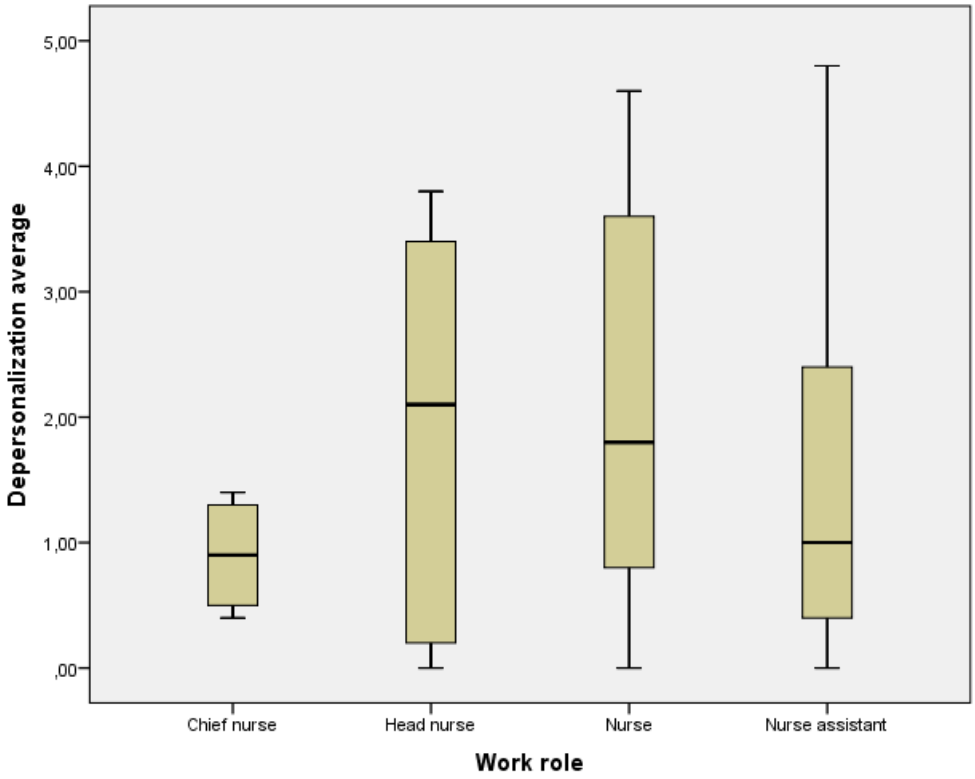


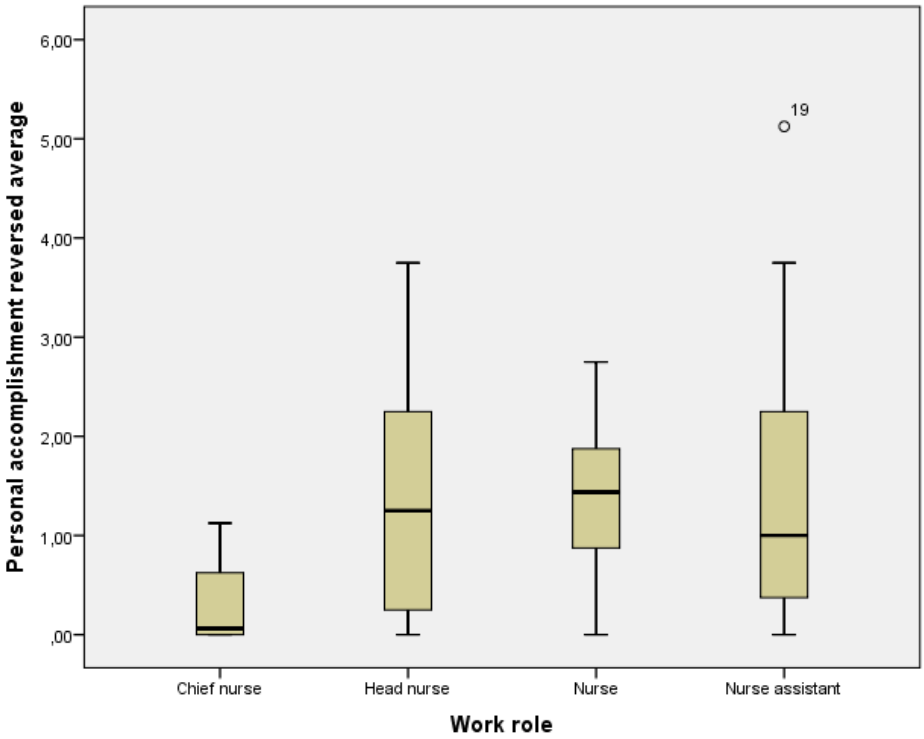




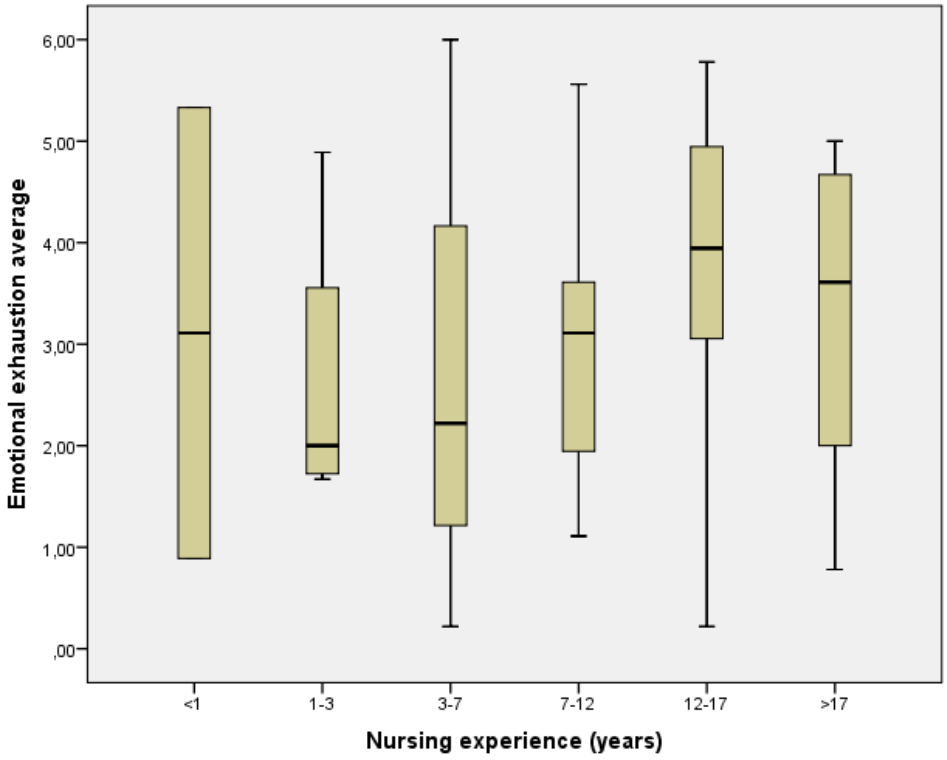
Appendix VIII Box plots

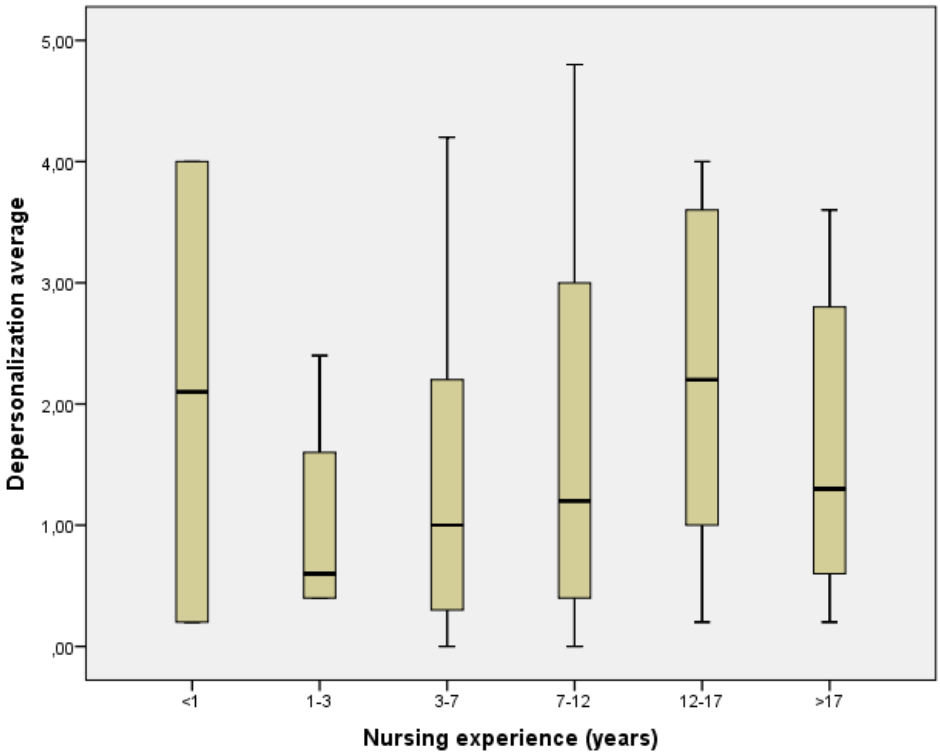


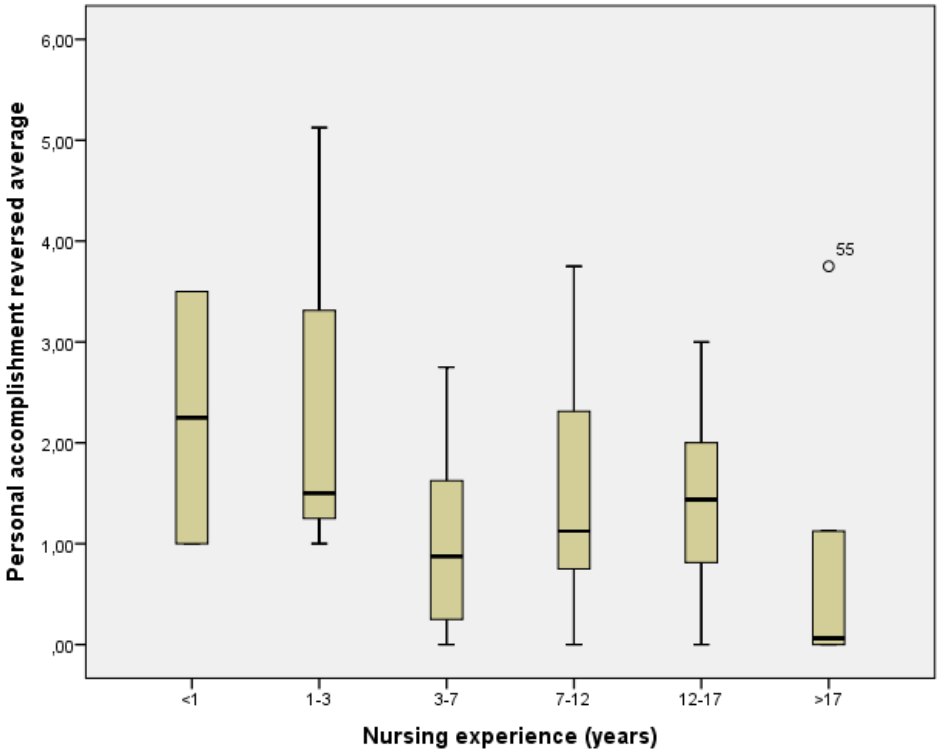




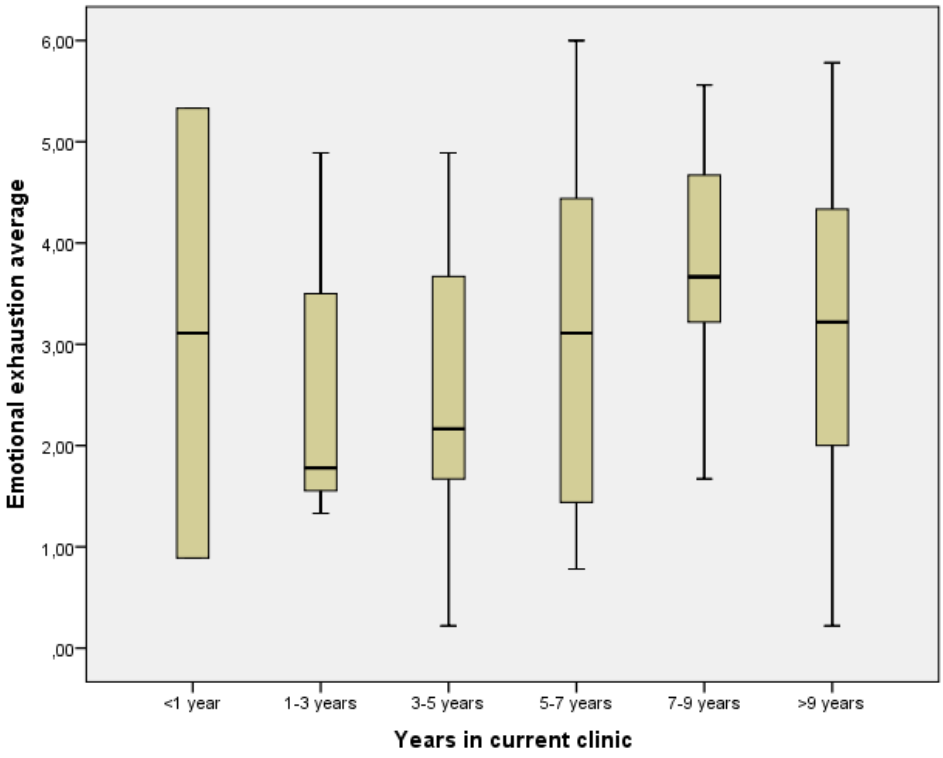
Appendix IX Box plots

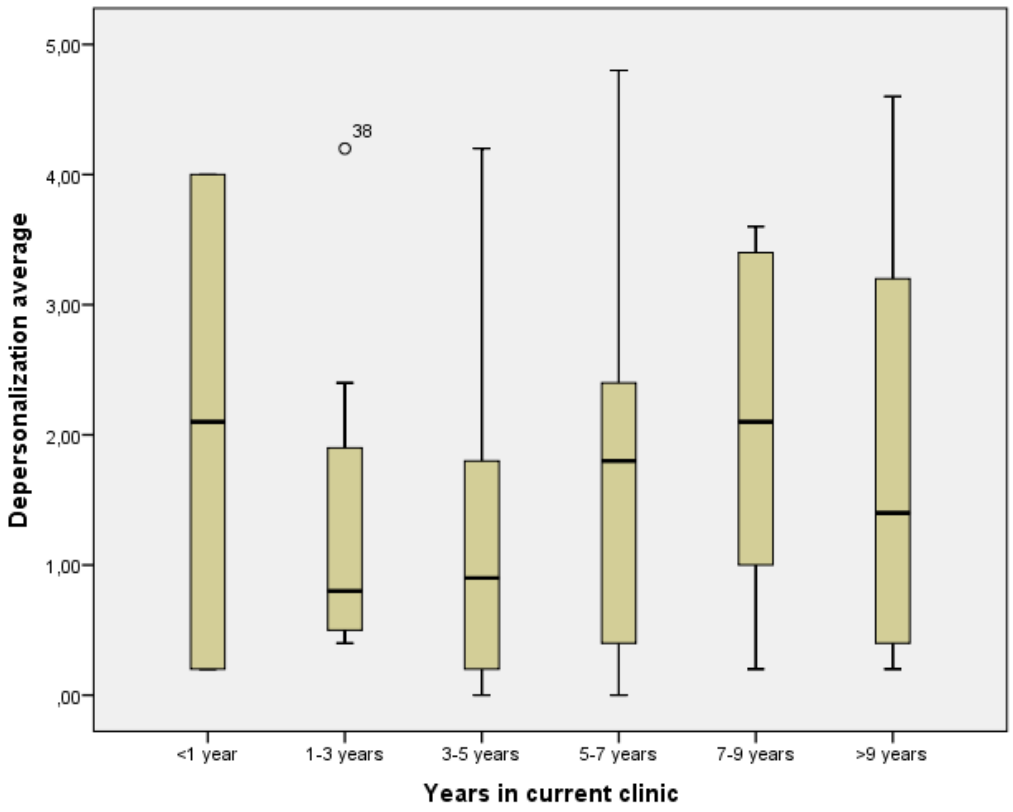


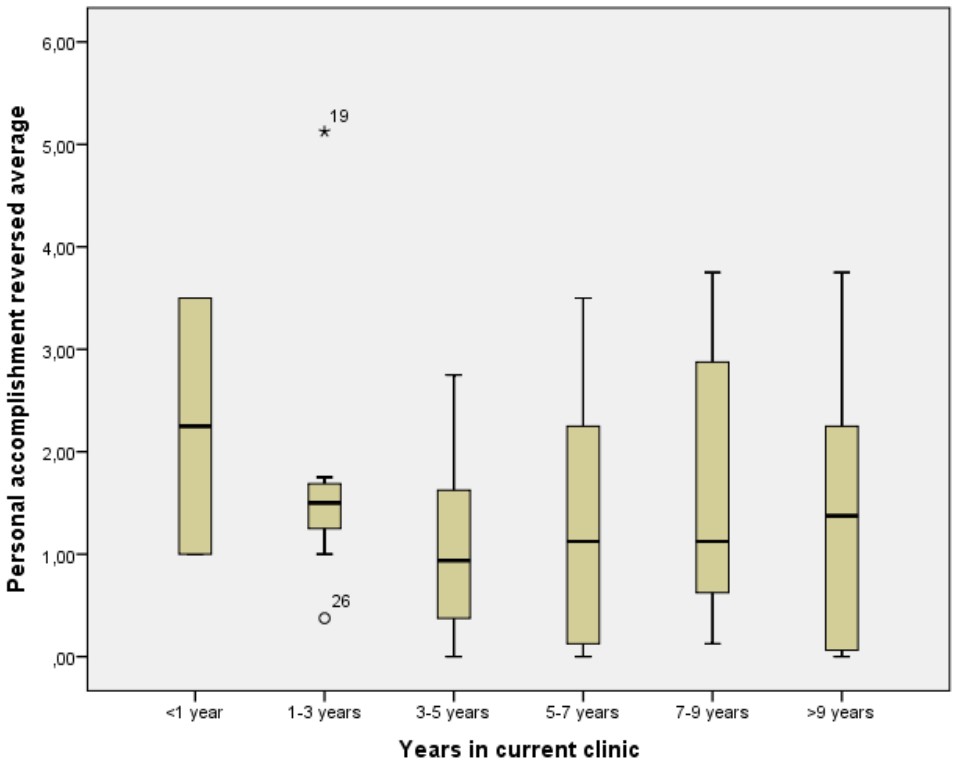




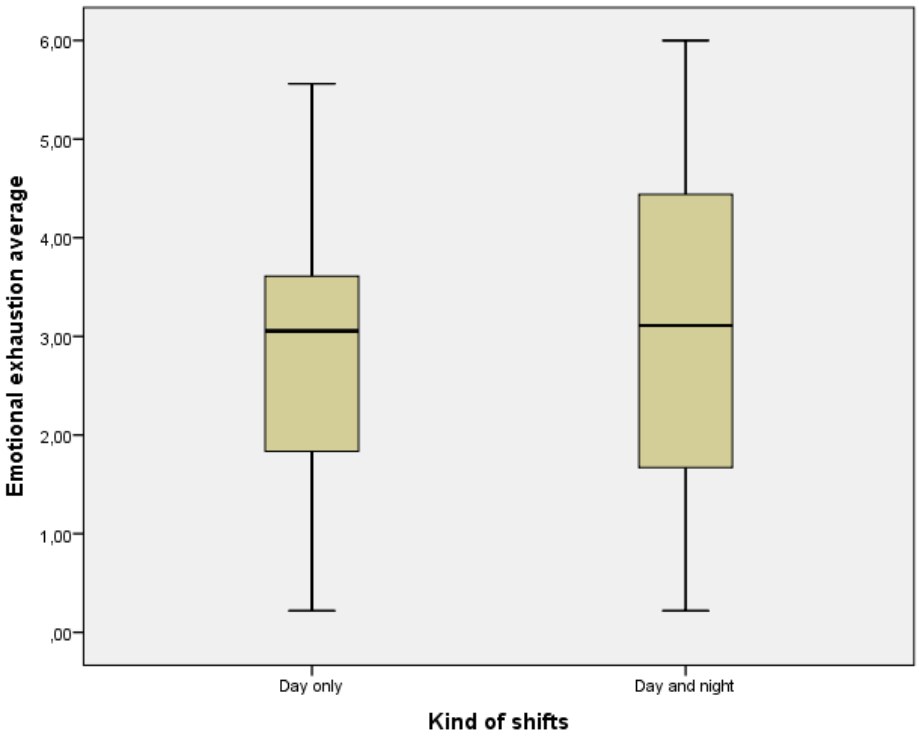
Appendix X Box plots

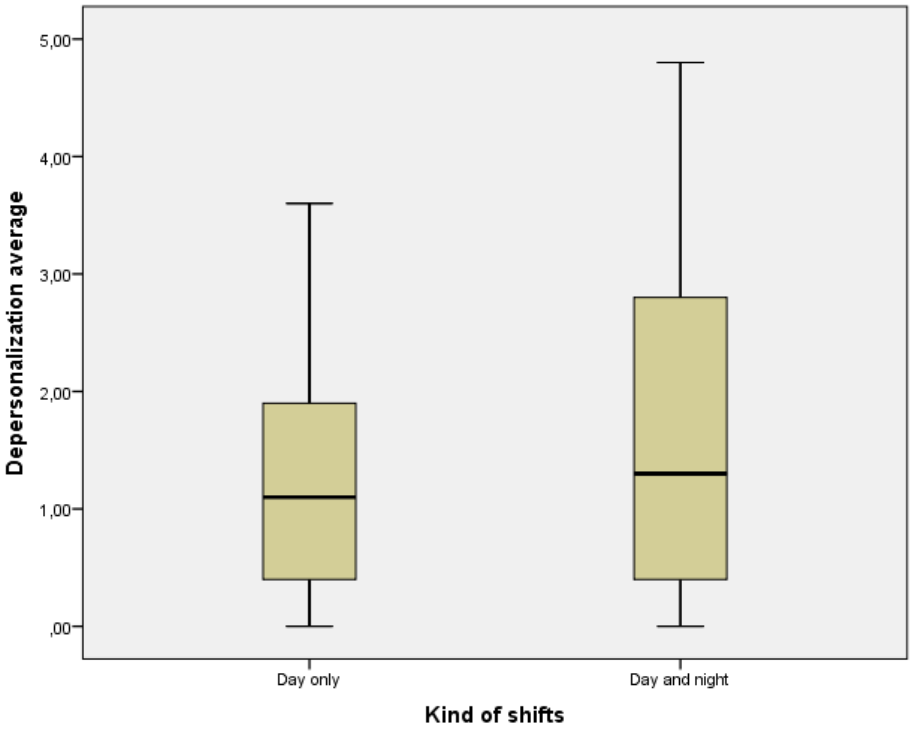


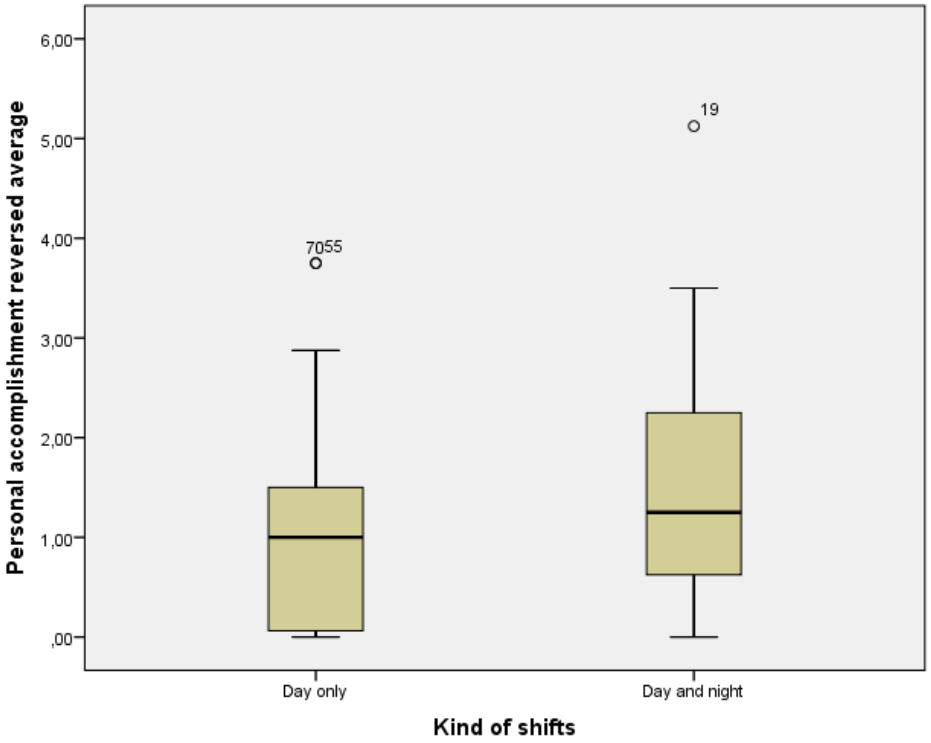




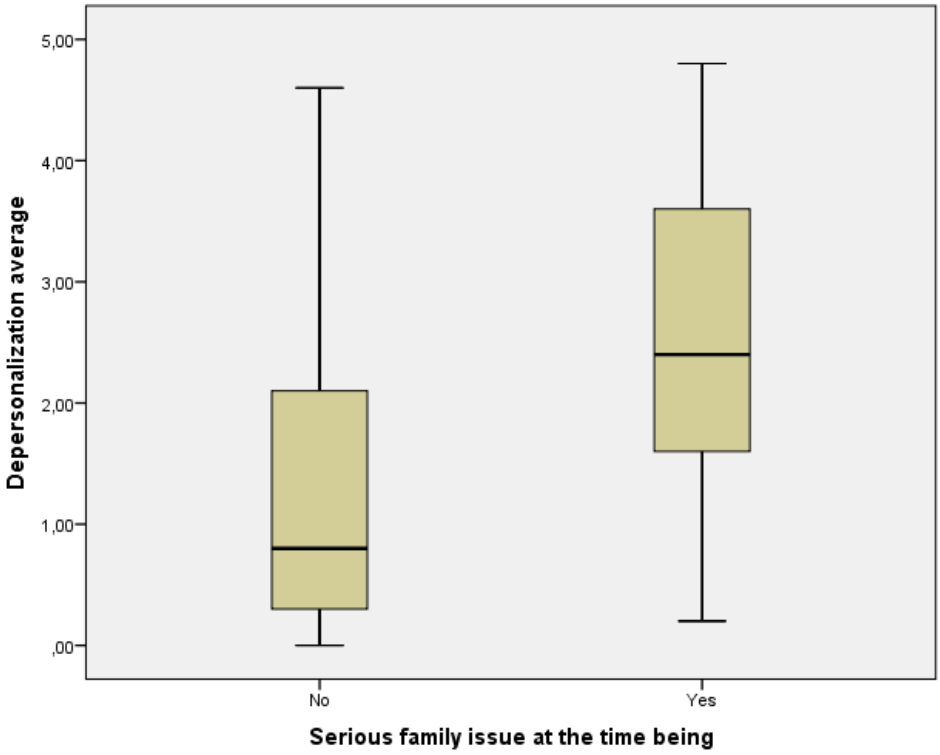
Appendix XI Box plots

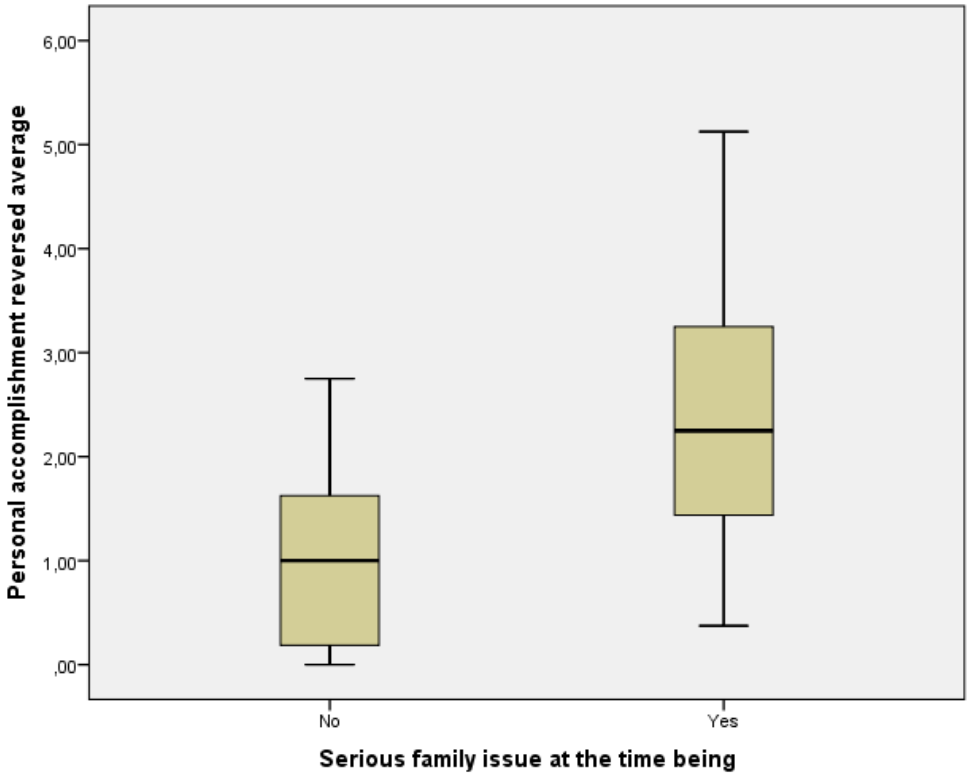






Appendix XII Box plots





Appendix XIII Test of Normality

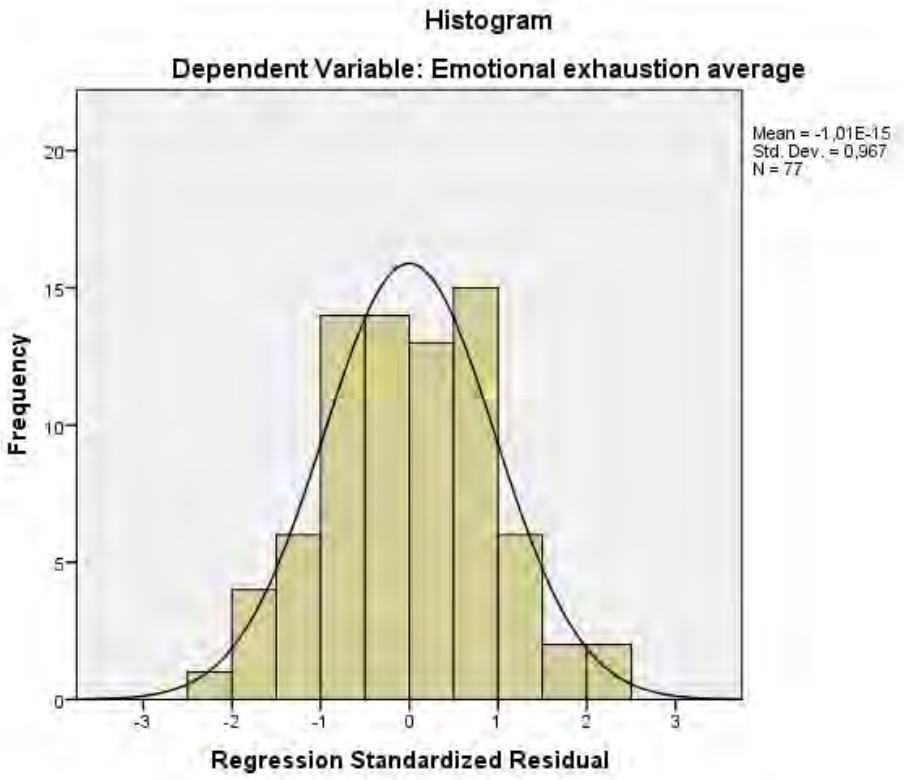
Tests of Normality

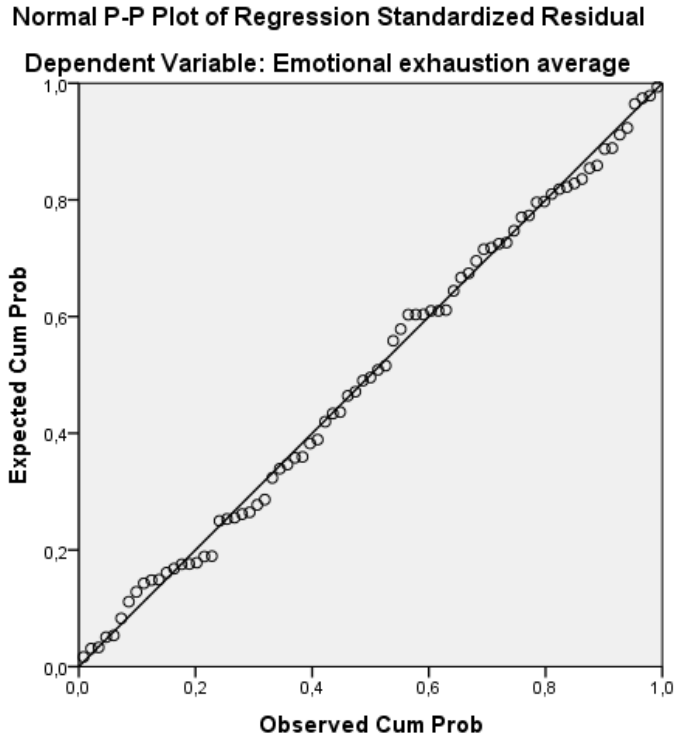
	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Age	,106	78	,030	,965	78	,033
Emotional exhaustion average	,100	78	,050	,963	78	,024
Depersonalization average	,150	78	,000	,899	78	,000
Personal accomplishment reversed average	,115	78	,013	,927	78	,000
Total burnout average	,057	78	,200*	,974	78	,111
Affective commitment average	,072	78	,200*	,978	78	,205
Continuance commitment average	,079	78	,200*	,977	78	,160
Normative commitment	,089	78	,200*	,975	78	,129
Total organisational commitment	,073	78	,200*	,986	78	,531
Role conflict average	,074	78	,200*	,980	78	,264
Role ambiguity average	,106	78	,030	,936	78	,001
Personal satisfaction average	,082	78	,200*	,966	78	,035
Satisfaction with workload average	,072	78	,200*	,977	78	,178
Satisfaction with professional support average	,085	78	,200*	,977	78	,165
Satisfaction with training average	,076	78	,200*	,983	78	,398
Satisfaction with pay average	,129	78	,003	,910	78	,000
Satisfaction with standards of care average	,079	78	,200*	,979	78	,228
Satisfaction with prospects average	,096	78	,075	,970	78	,062
Overall job satisfaction average	,059	78	,200*	,973	78	,090

*. This is a lower bound of the true significance.

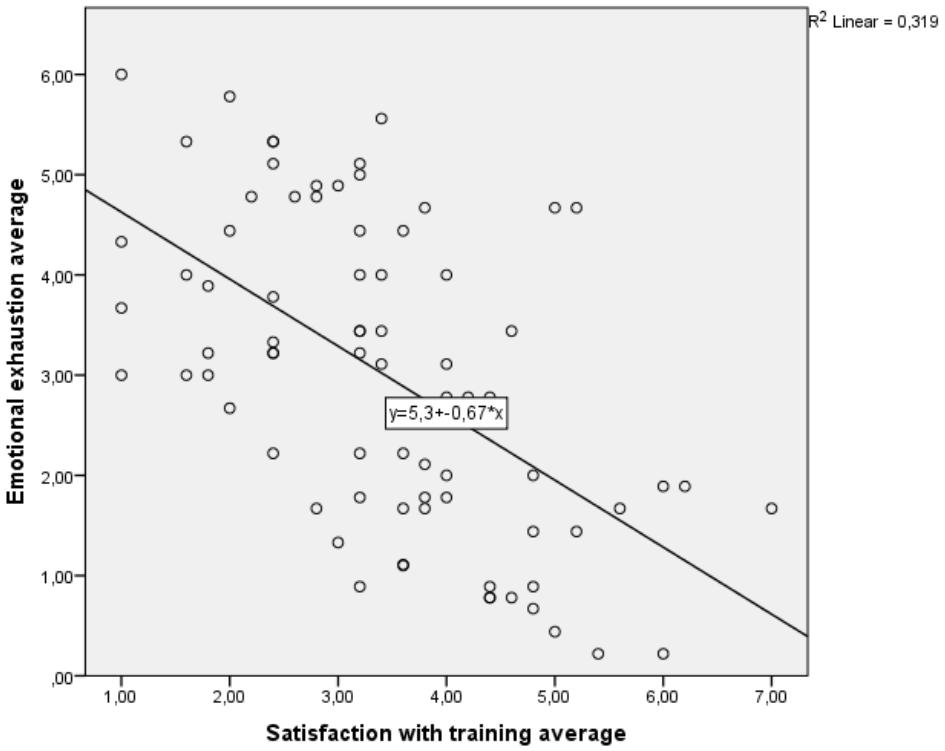
a. Lilliefors Significance Correction

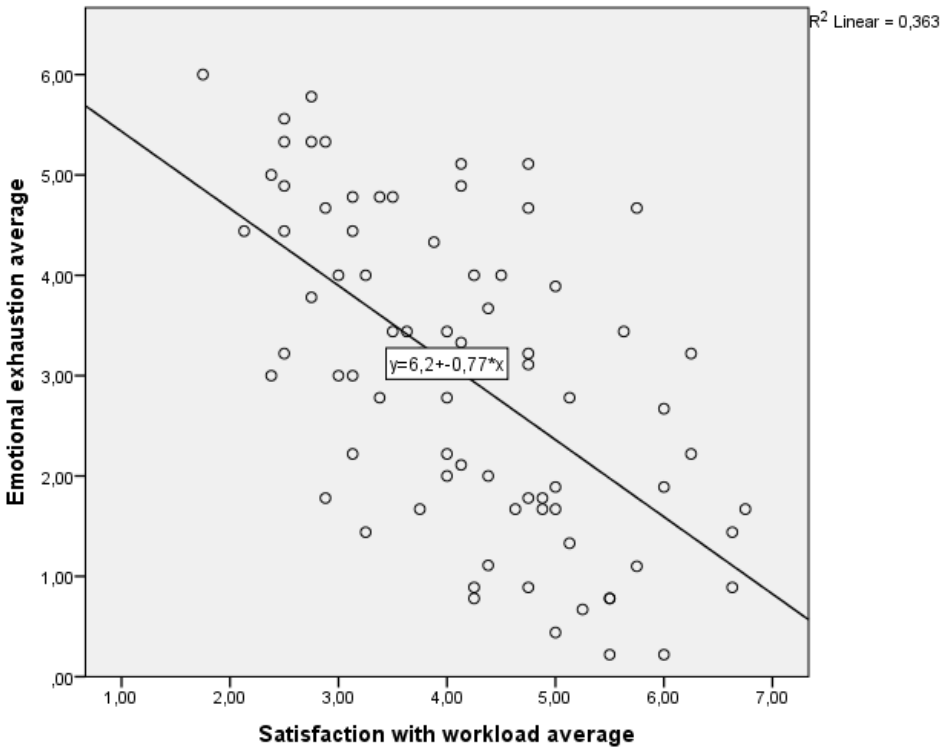
Appendix XIV Histograms Normal P-P Plots SRD Emotional exhaustion

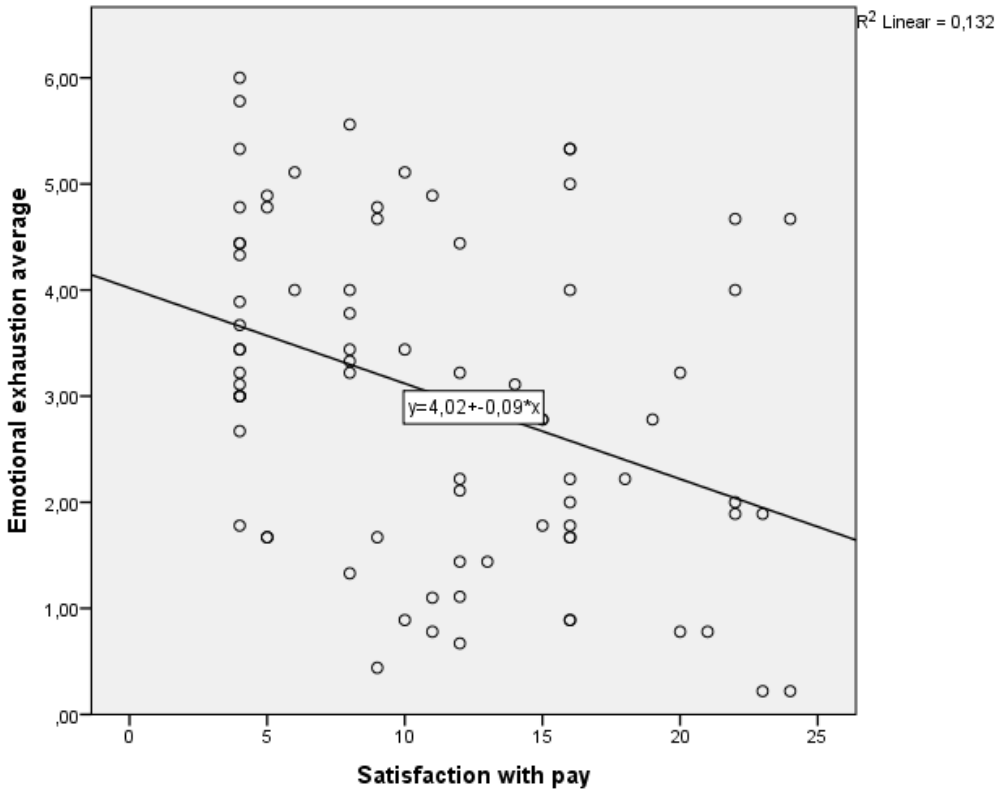


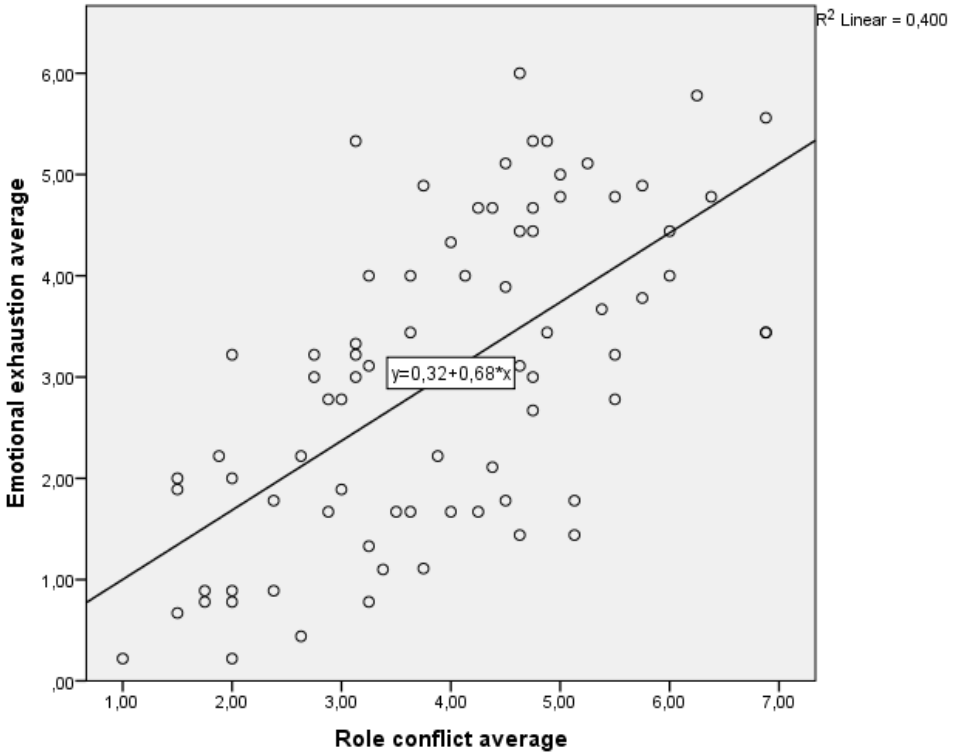


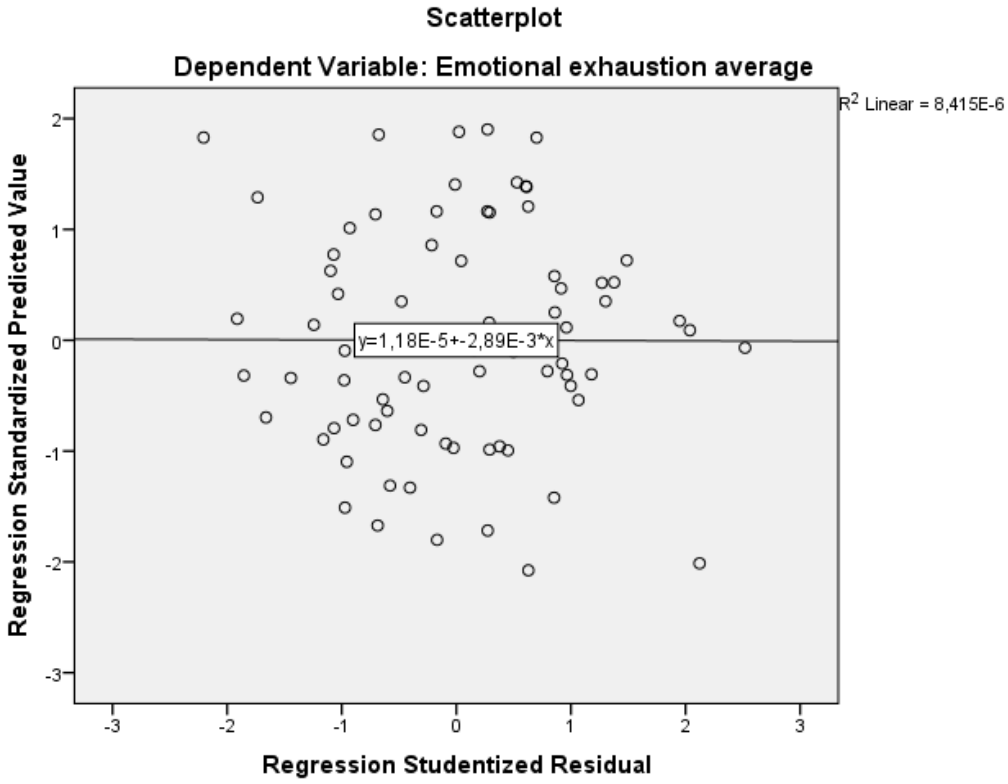
Appendix XV Partial regressions-studentized resids scatter plot



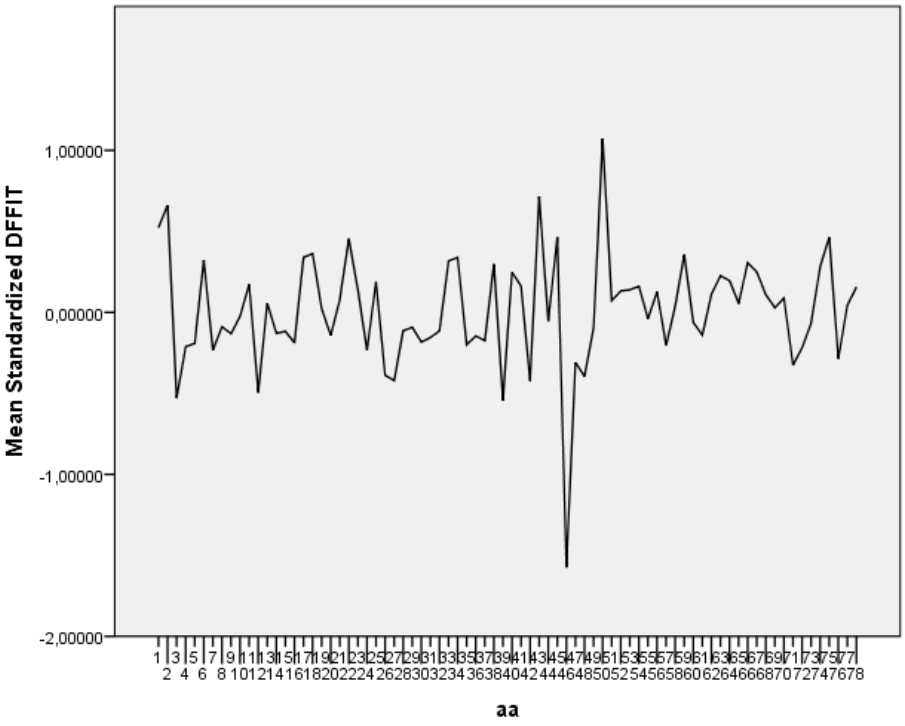


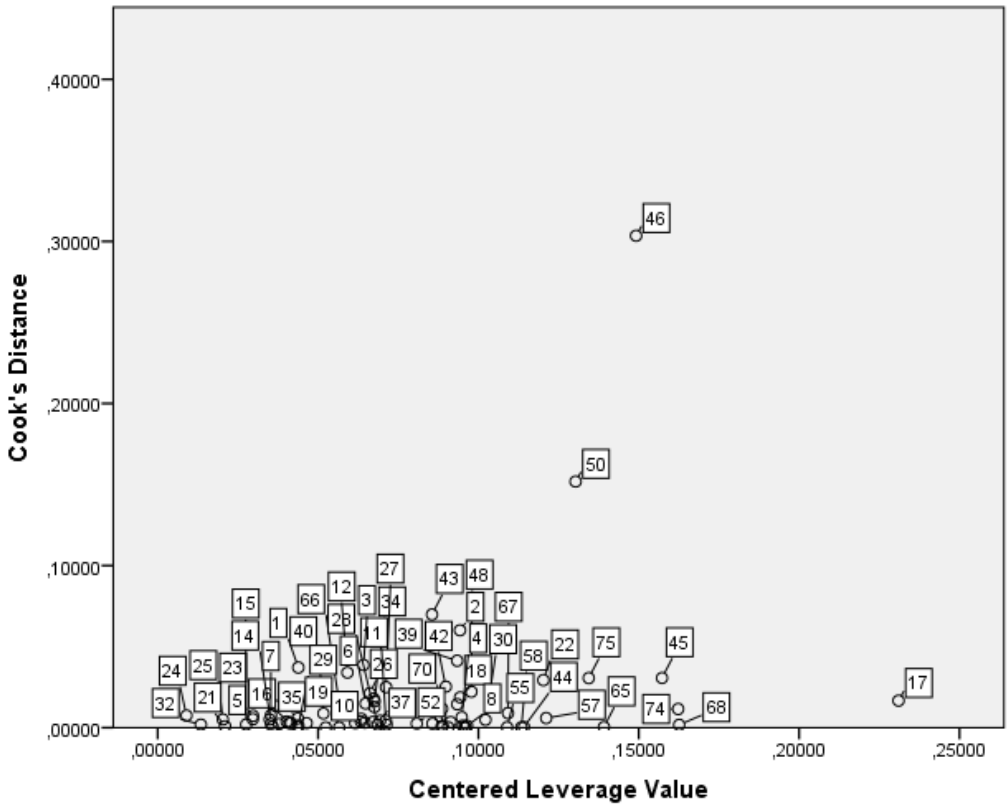


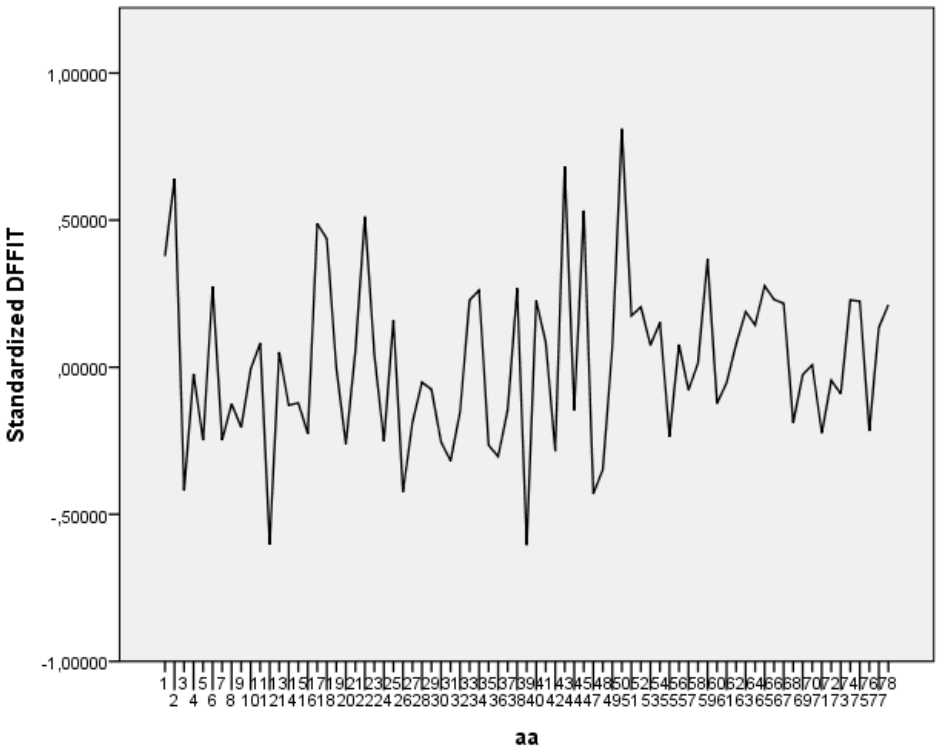


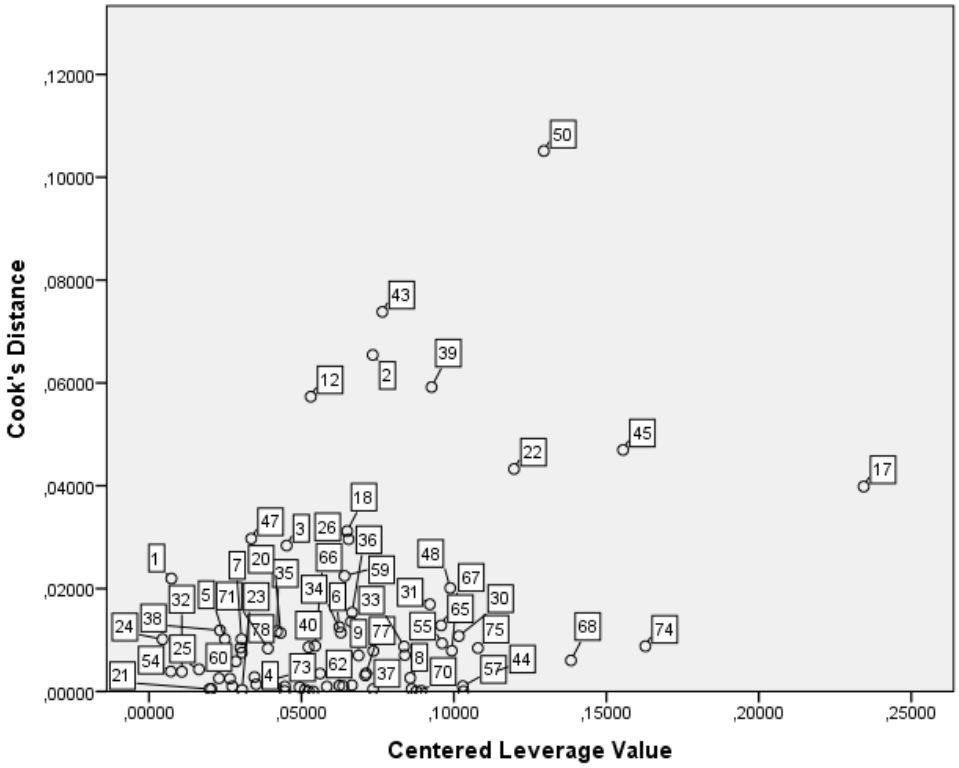


Appendix XVI DFIT'S - Cook's distance

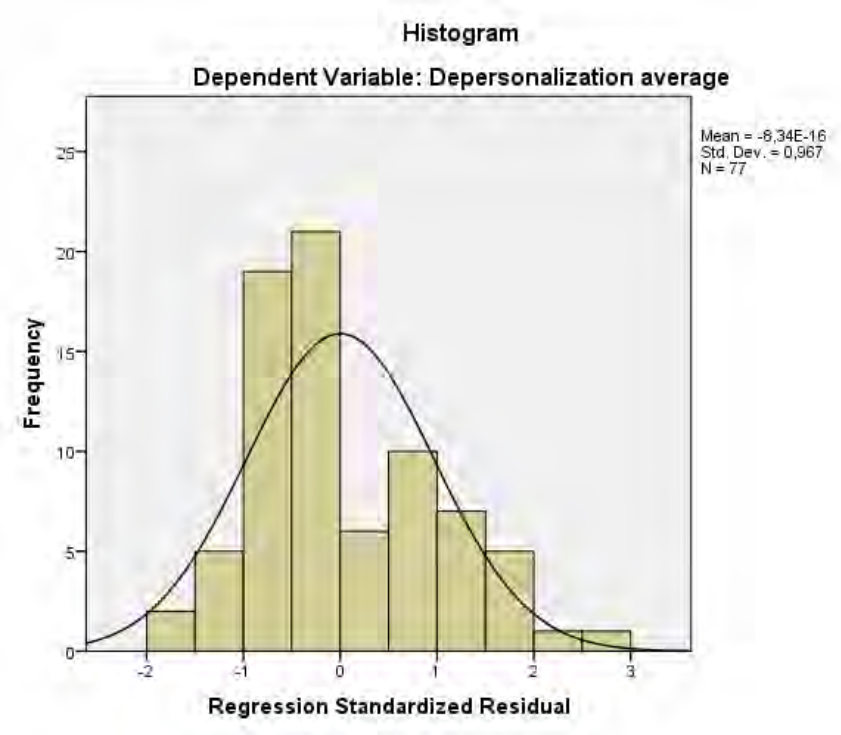


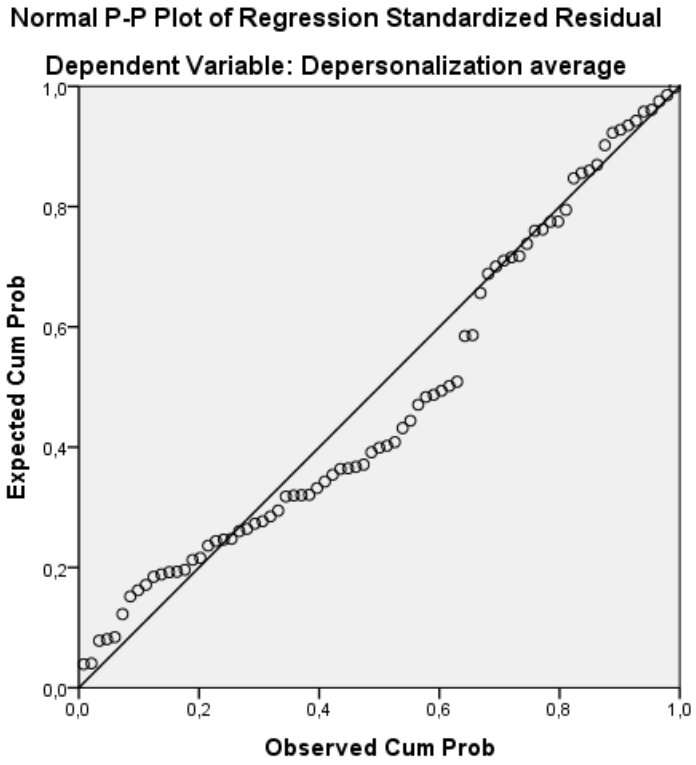




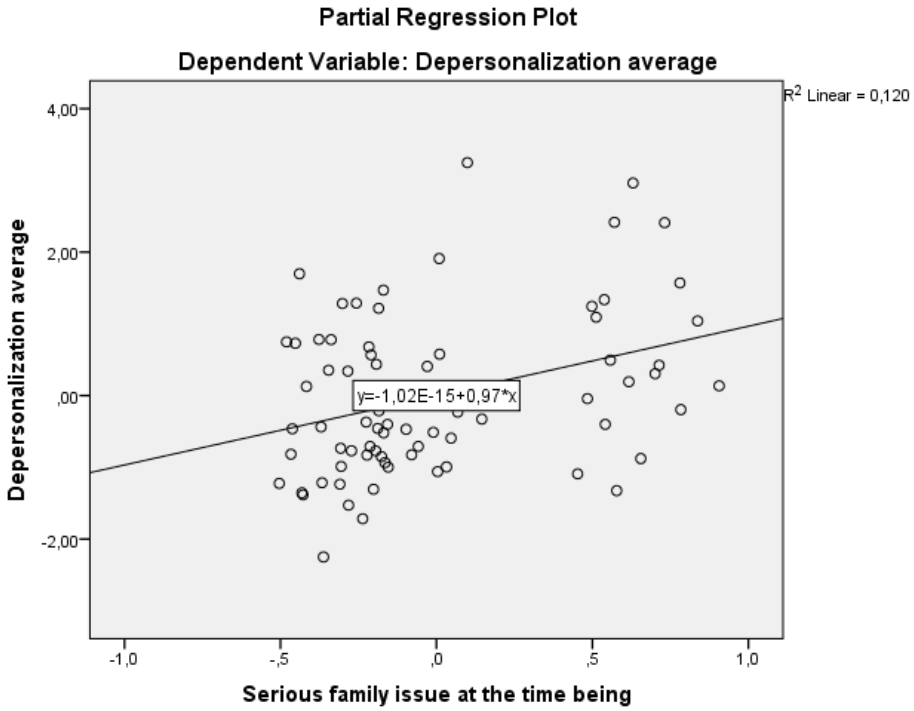


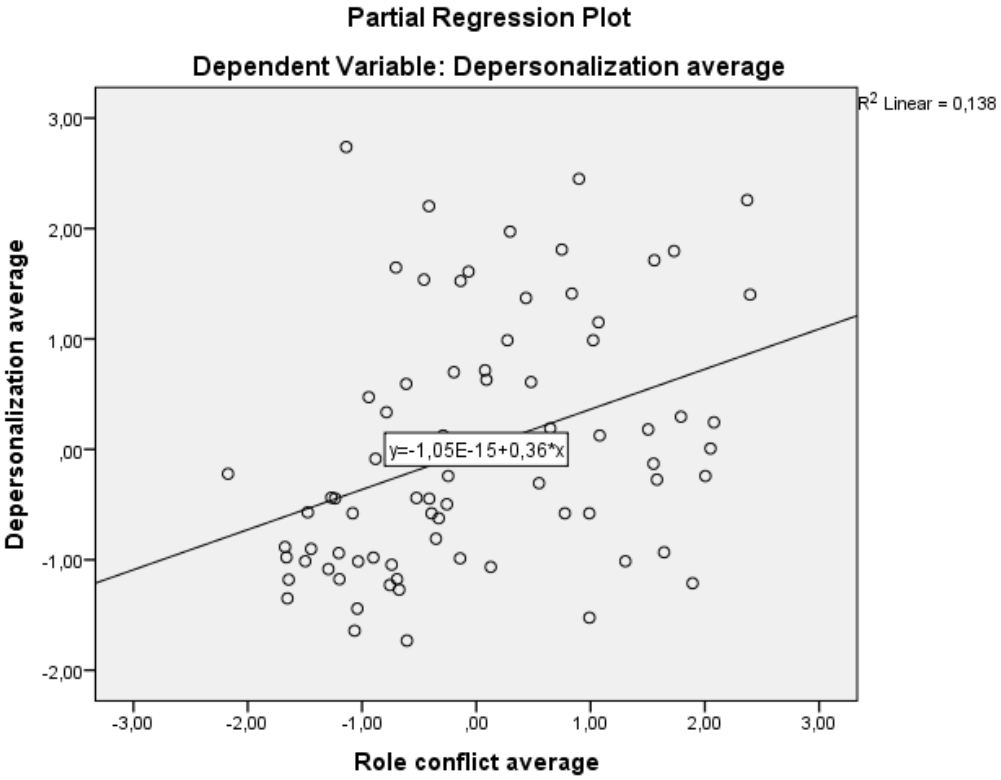
Appendix XVII Histograms Normal P-P Plots SRD depersonalization

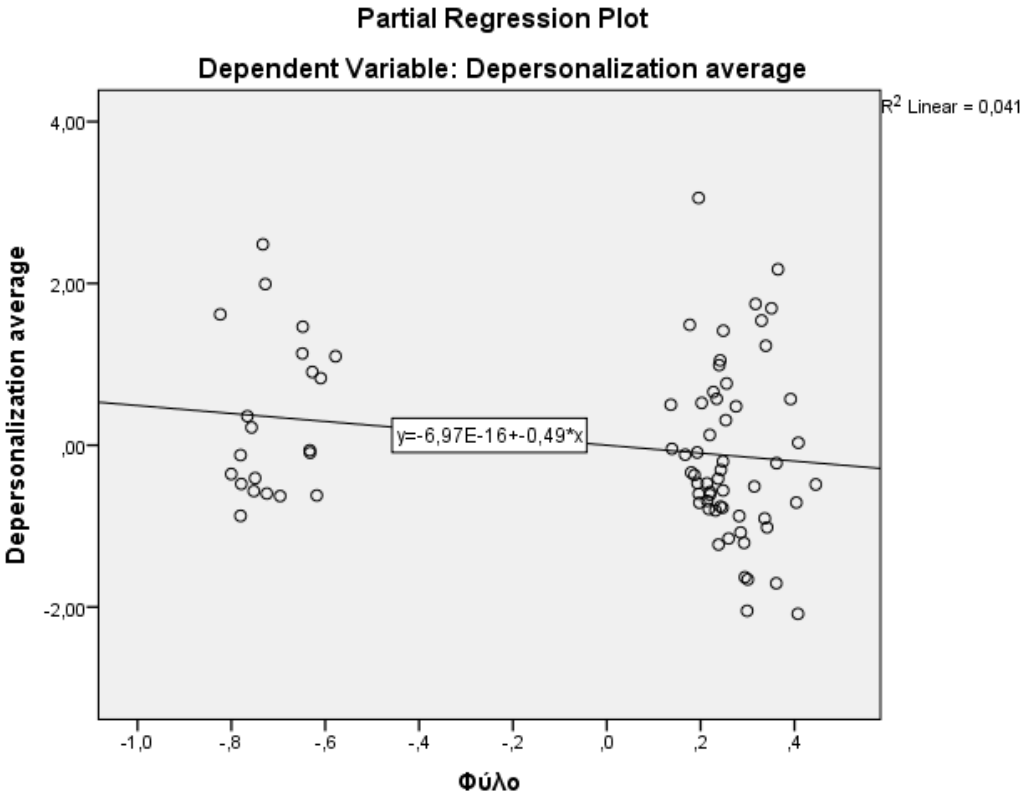


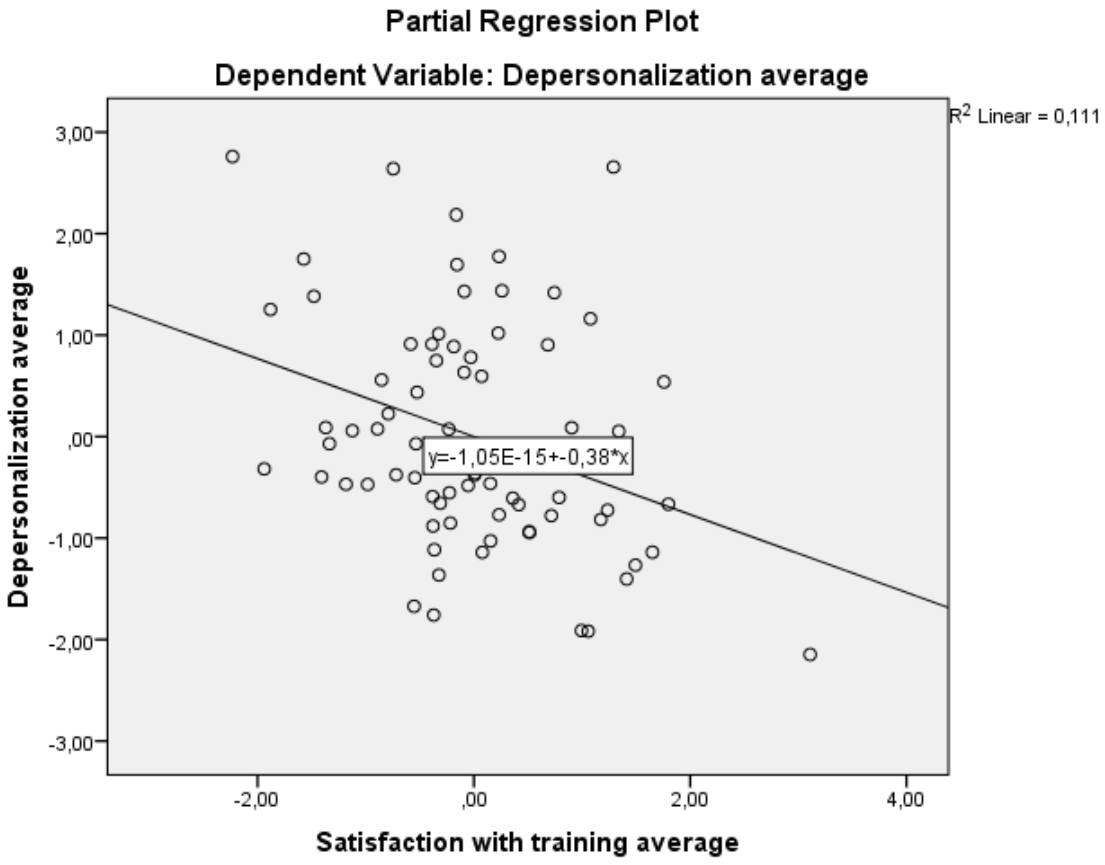


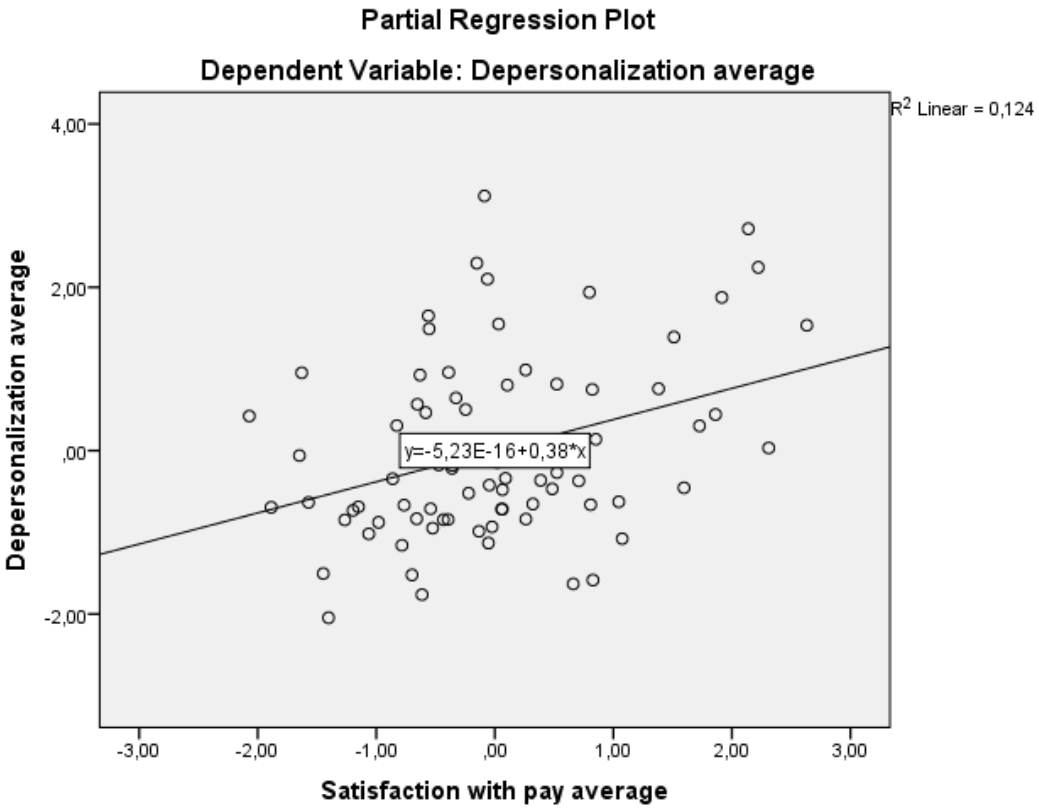
Appendix XVIII Partial regressions-studentized resids scatter plot

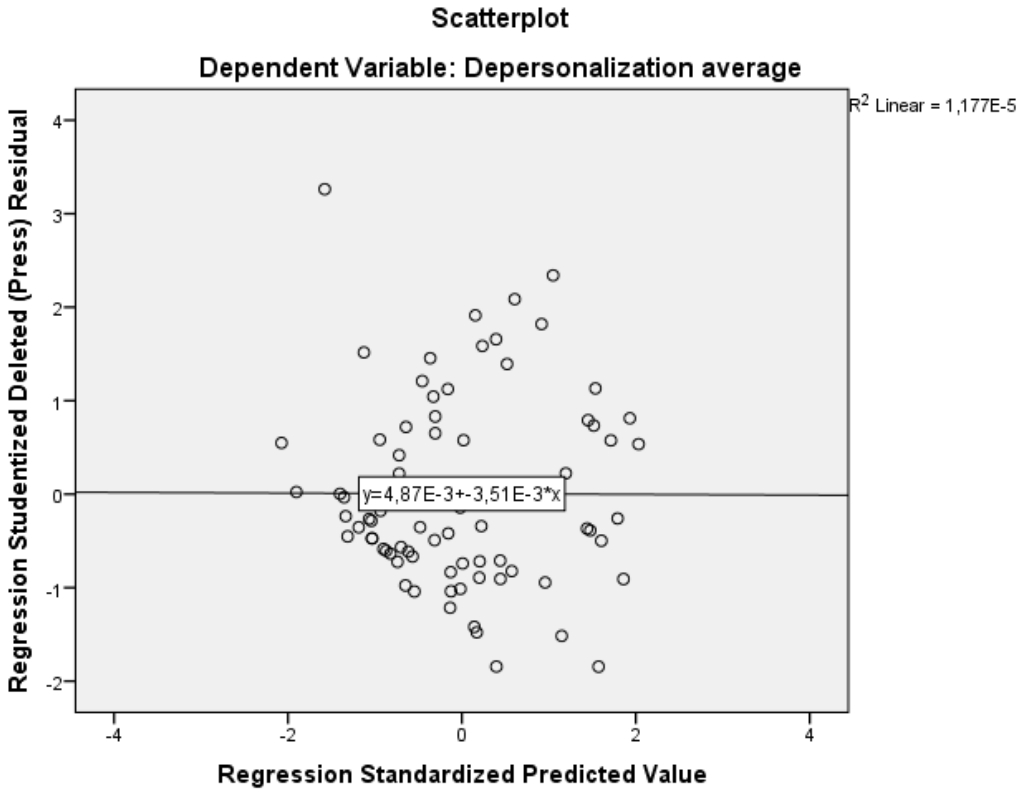




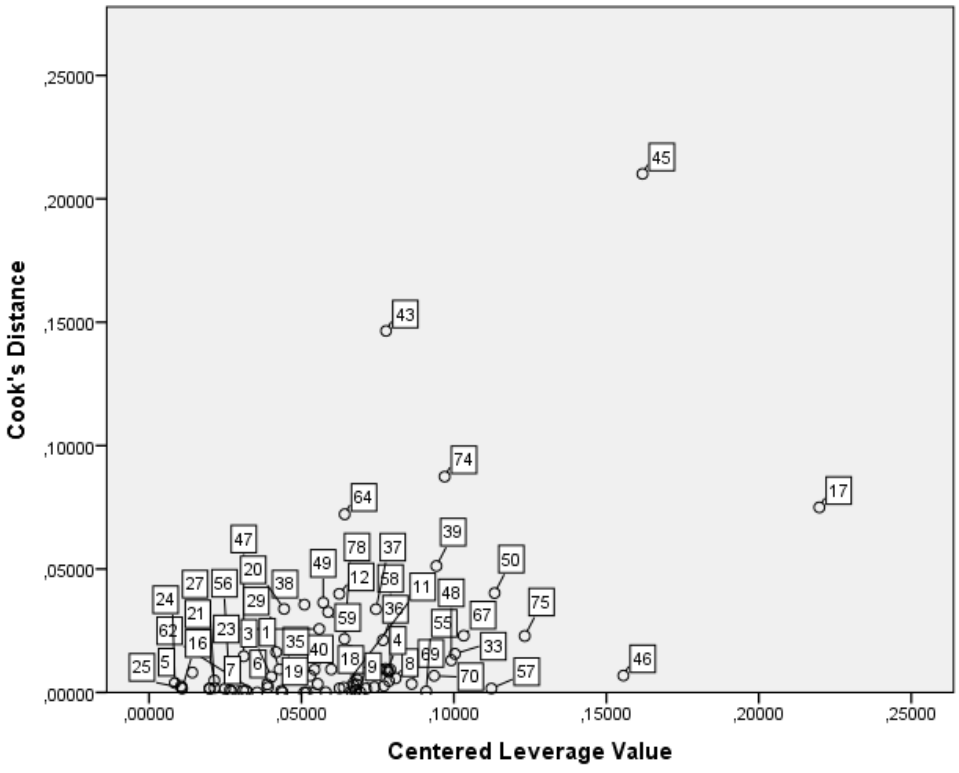


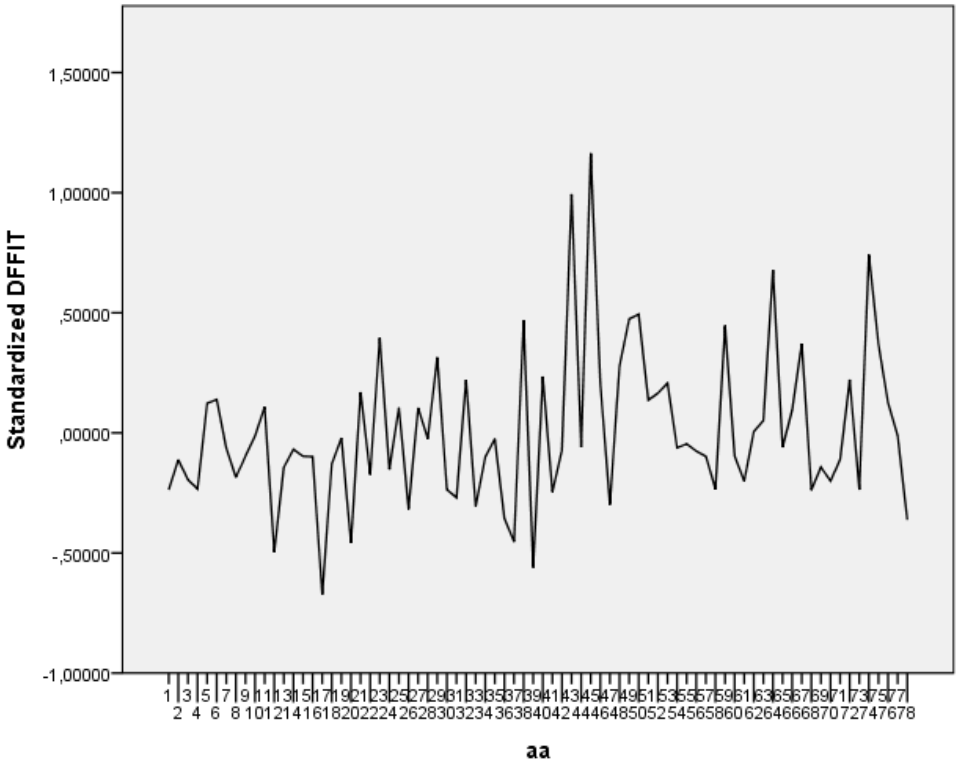


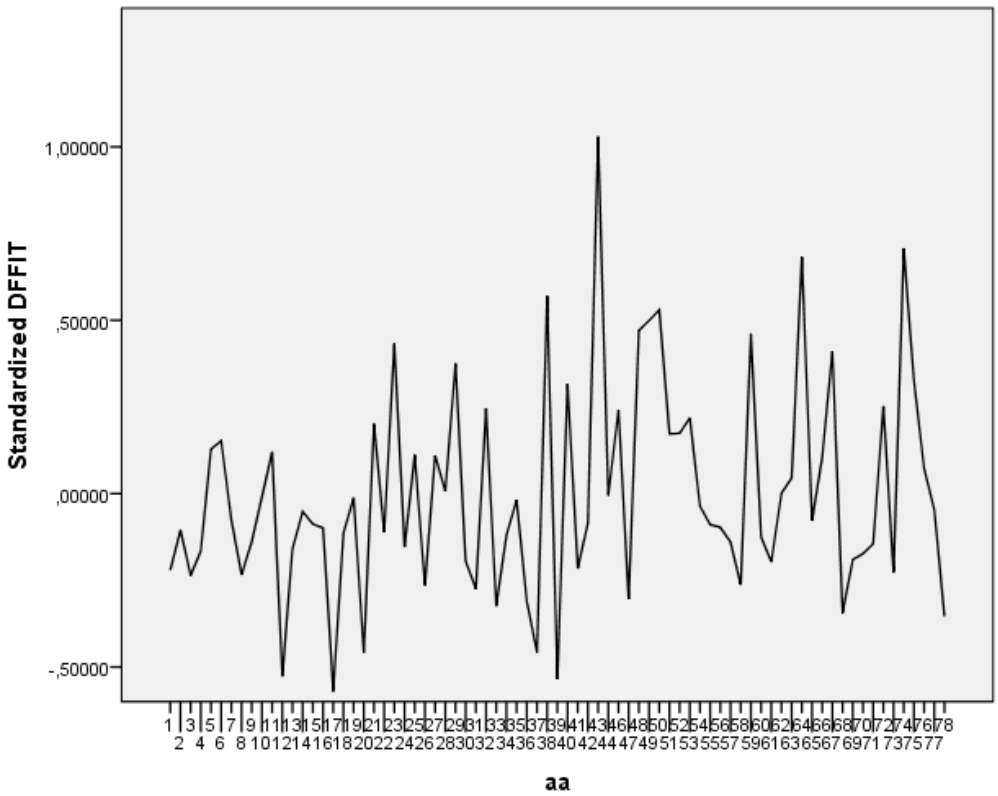


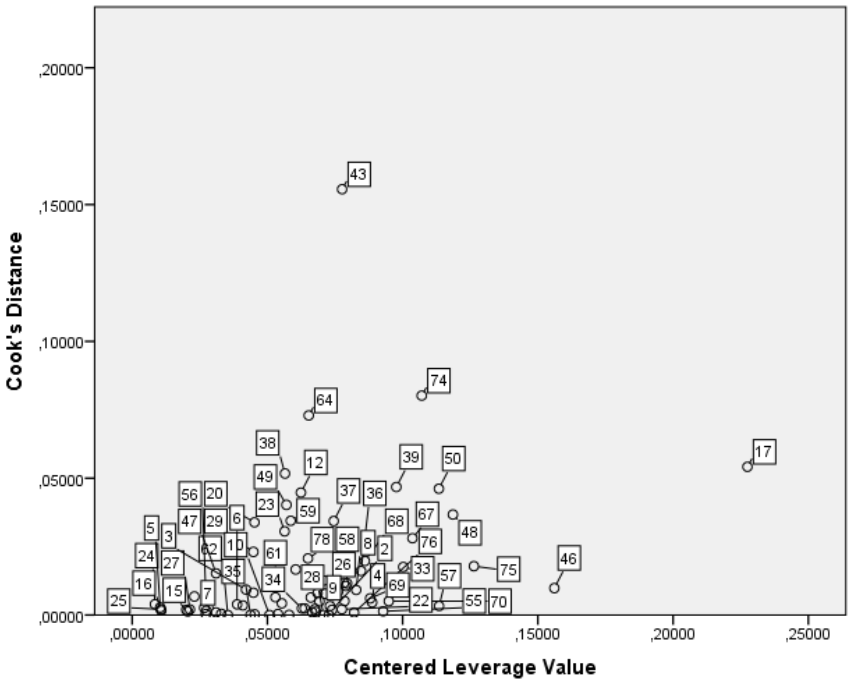


Appendix XIX DFIT'S - Cook's distance

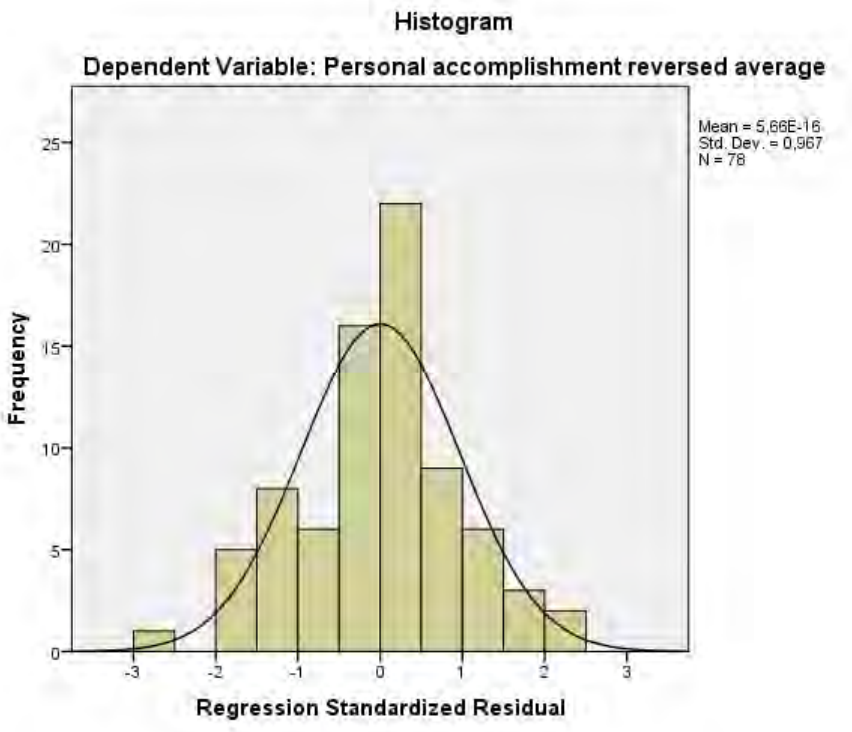


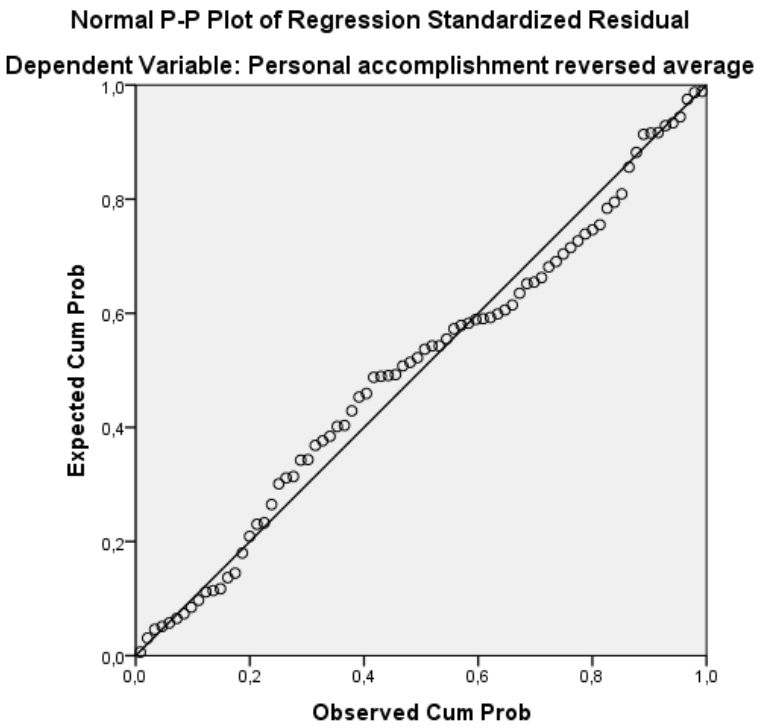




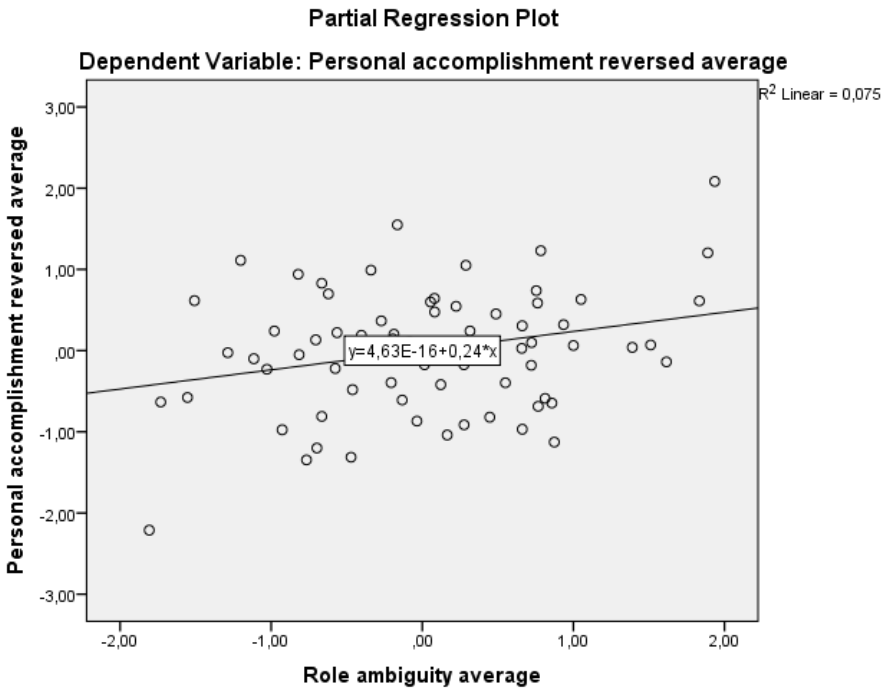


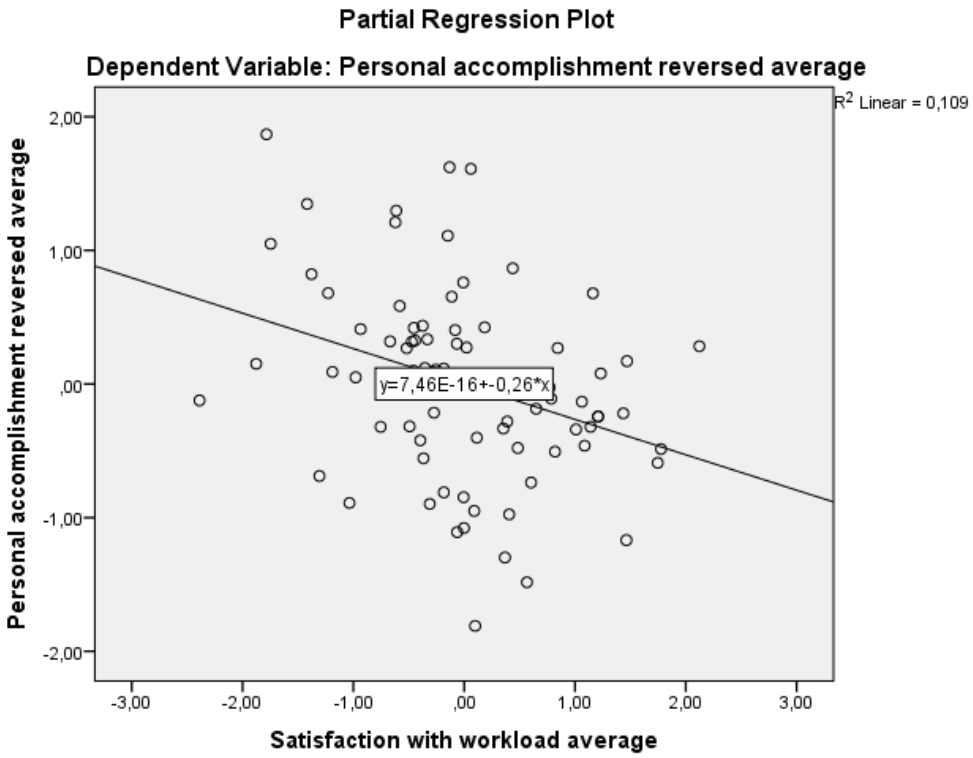
Appendix XX Histograms Normal P-P Plots SRD personal accomplishment

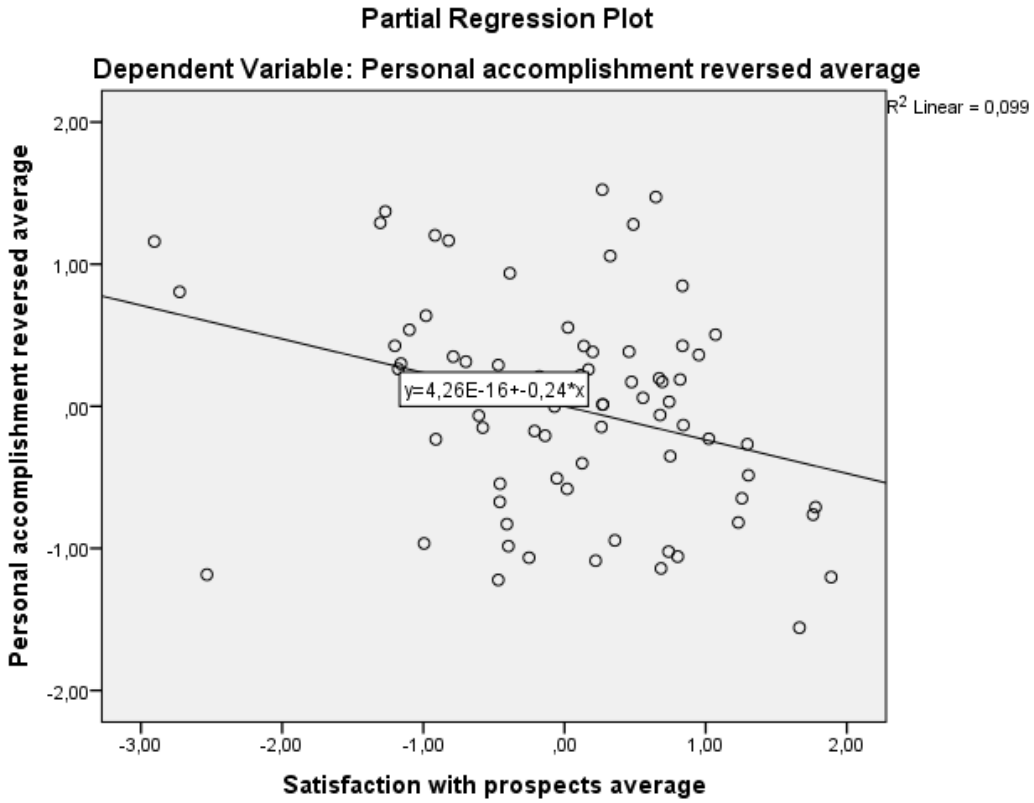


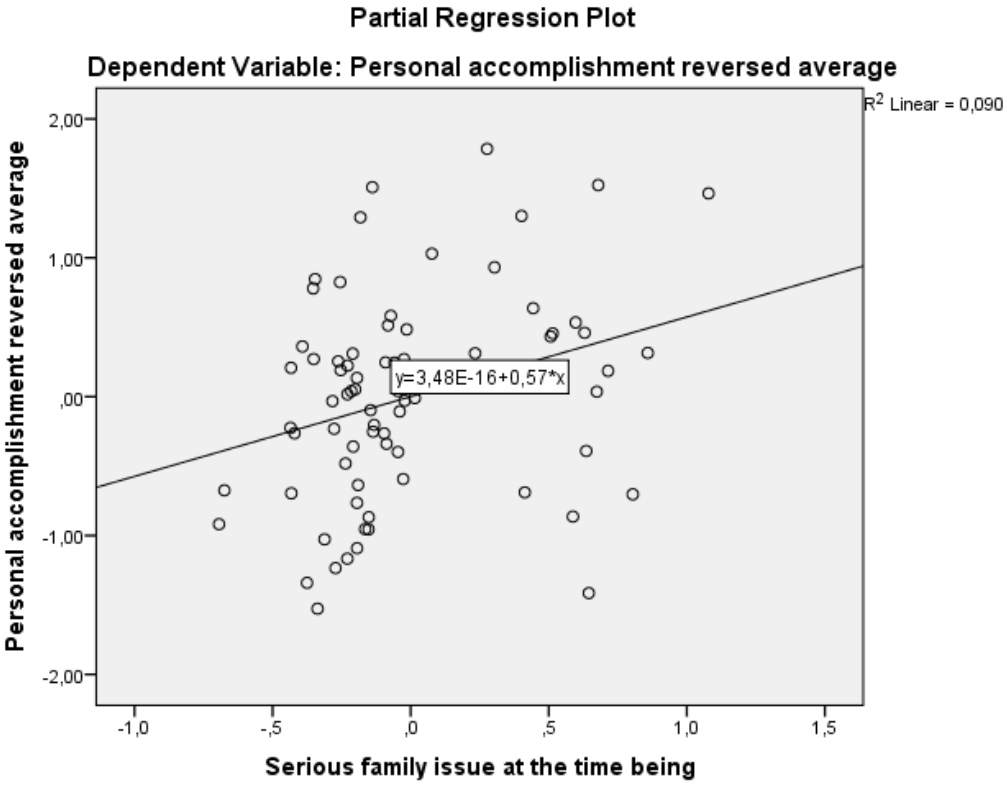


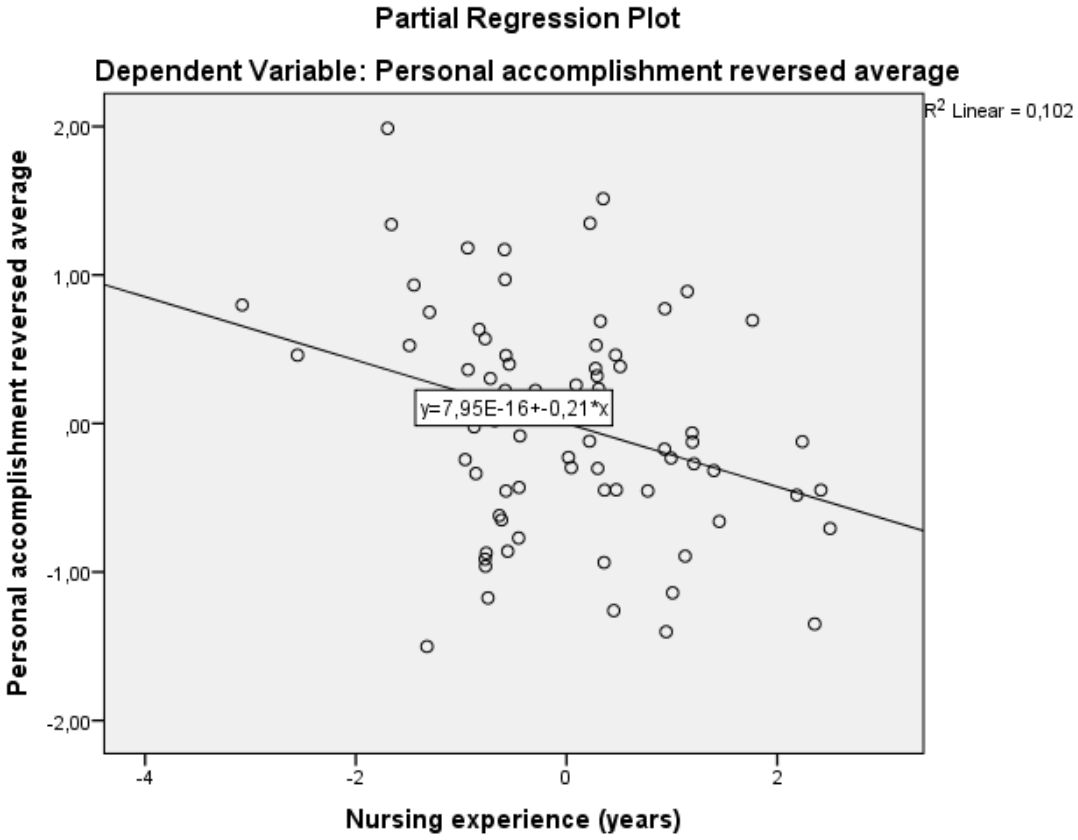
Appendix XXI Partial regressions-studentized resids scatter plot

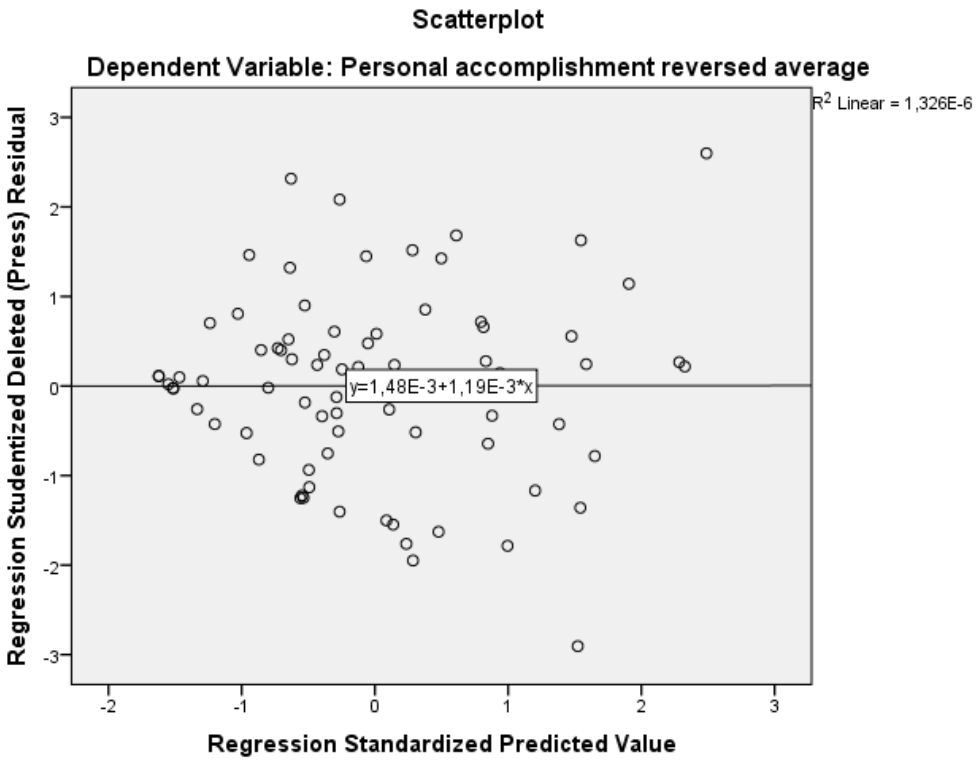




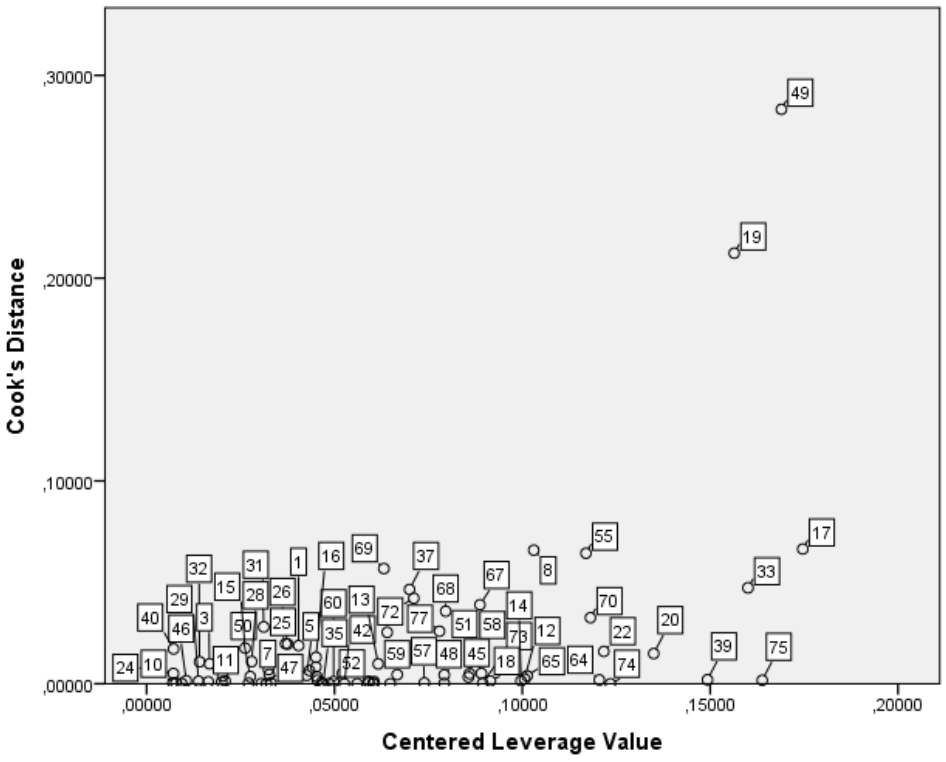


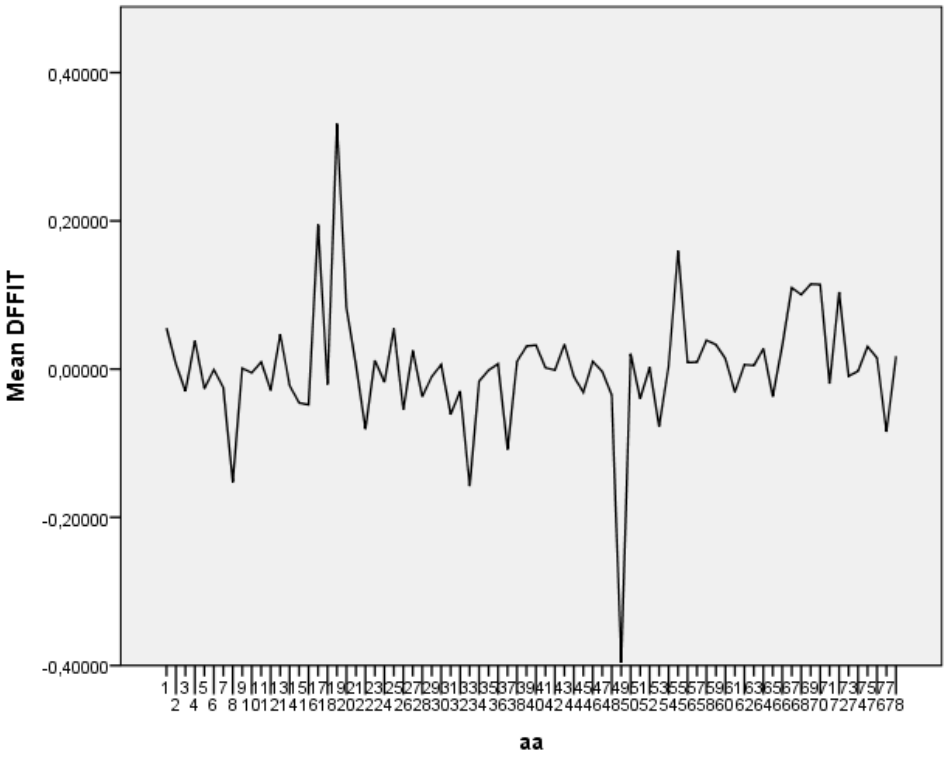






Appendix XXII DFIT'S - Cook's distance





APPENDIX XXIII

Staffordshire University Faculty of Business and Law
Application for Ethical Approval of Research Project

This form must be completed by the researcher, and submitted (in the case of undergraduate – and post graduate projects) to the designated supervisor, who should consider it and if approved, then forward it to the Faculty Research Ethics Committee (REC) for approval. No primary research may commence before approval is granted by the Faculty REC. All parties (researcher, supervisor, Faculty REC) should keep it on file as an agreed record of the research being undertaken. Proposals for staff research projects that require ethical approval should also be considered by this Committee.

Please see the accompanying notes. The boxes, below, should be expanded to fit the text as necessary.

1. RESEARCHER

Name: KONSTANTINOU ADAMOS - KONSTANTINOS

Course (in full): MASTER IN BUSINESS ADMINISTRATION

Supervisor: DR. BELLOU VICTORIA

Academic status of applicant: POST GRADUATE STUDENT

Commencement and expected duration of project: 04/2011 – 06/2014

2. RESEARCH PROJECT

Title: BURNOUT AMONG PSYCHIATRIC NURSES

3. PURPOSE OF RESEARCH PROJECT

To determine burnout levels of nurses employed in the mental health sector in the region of Larissa, Greece. To investigate the existence and nature of relationships between burnout and organizational factors. To create models that predict in the best way the dimensions of burnout.

4. BRIEF OUTLINE OF PROJECT

The project takes place in the region of Larissa, Greece. Mental health nurses from the psychiatric clinics of the region will compose the sample in the study. All three dimensions of burnout will be addressed (emotional exhaustion, depersonalization and personal accomplishment). The organizational factors to be tested are Job Satisfaction and its dimensions (pay, workload, personal satisfaction, prospects, training, professional support & standards of care), Organizational commitment and its dimensions (affective, continuance, normative), Role Conflict and Role Ambiguity. Burnouts differences between groups created

in the sample from socio-demographic characteristics will be investigated. Self administrated, structured questionnaires will be distributed to mental health nurses from the psychiatric clinics. Measurement instruments in the study are Measure of Job Satisfaction (MJS), Maslach Burnout Inventory (MBI), Allen & Meyer's revised Organizational Commitment scale, Role Conflict scale & Role Ambiguity scale. Questionnaires will be gathered by Head nurses of each clinic and then will be handed out to the author. The study will be cross-sectional, descriptive and explanatory. Data will be analyzed statistically with the use of SPSS 21.0 tool. T – tests, ANOVA'S, frequencies, descriptive, correlations (bivariate and partial) and multiple regression analyses will be used in order to answer to the research questions.

5. Recruitment of Participants

The population consists of all mental health nurses of the private health sector in Larissa (N=318 approximately). All nurses are working full time and work as employees in their clinics. Nurses for the public health care sector are excluded (exclusion criteria) due to different organizational issues and small number of nurses. There will be no payment incentives and there no promise for benefits. A general description of the purpose of the study is included in the questionnaire and verbal explanations will be given by the deliverance. Details for nurses on how to enroll are provided in the questionnaire (contact info).

6. Consent of Participants

Admission of the directors of each clinic will be necessary in order to start delivering questionnaires. All nurses will be asked by the author if they agree to participate after they

get thoroughly informed for the project and its aims. It will be assured verbally and written that information is anonymous. Participants aren't obliged to return questionnaires.

7. INFORMATION AND DATA

Primary data will be generated through the self administered questionnaires. The research is quantitative in nature. Secondary data are used in a scientific way in order to form the research objectives. Journals, books, papers and internet sites will be accessed. After the statistical analysis is done, primary data will be compared to secondary data in order to answer to the research questions.

8. RISK, HARM AND OTHER ETHICAL CONSIDERATIONS

Although the principles of respect of persons, beneficence and justice will be applied strictly in this project, the process of completing a questionnaire that includes questions about psychological factors and sensitive job information may cause distress to the participants.

9. SIGNATURES OF RELEVANT PERSONS

I undertake to carry out the project described above in accordance with ethical principles. I have completed the application in good faith. I accept that providing false information constitutes scientific fraud and will be subject to appropriate disciplinary procedures.

Signature of Researcher Date

I have examined this proposal, confirm that the rationale and methodology is appropriate and that it can proceed to the stage of ethical consideration.

Signature of Supervisor or relevant Head of Unit Date

This research proposal has received ethical approval either by a supervisor on behalf of the Committee or has been considered by the Committee and received ethical approval.

Signature of Chair of Faculty Date

Research Ethics Committee