Person-Centered Psychotherapy & Adlerian Psychotherapy: Impact on Occupational Stress in Greek Women

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Abstract
The purpose of the present study is to investigate in the time of the great economic recession, the occupational stress experienced by self/employed women in Greece and whether two different kinds of psychotherapy (Person-Centered and Adlerian) affect stress levels. Using the ASSET questionnaire, the study is based on a sample of 178 women, grouped in 3 categories: those that have had at least 6 months of Person-Centered Psychotherapy (59), those that have had at least 6 months of Adlerian Psychotherapy (59) and those that have never had any kind of psychotherapy (60). The effect of the 3 psychotherapeutic conditions on 12 stress factors is examined through various inferential statistical methods. The results suggest that the Person-Centered psychotherapy may affect the “sense of control” and the perceived “work-life balance” in the working environment of the individual, while the Adlerian approach may be related to the broader “psychological well-being” of the person. The findings provide important insights to our knowledge on working stress in women and can be used as a stepping stone in further elaborating the female stress in crisis-stricken countries, or extended to different cases.

Keywords
Work Stress, Occupational Stress, Economic Crisis, Person-Centered Therapy, Rogerian Psychotherapy, Adlerian Psychotherapy, Individual Psychotherapy, ASSET Questionnaire, Perceived Control at Work, Perceived Work-Life Balance, Psychological Well-Being

1. Introduction
Work stress gained attention in the second half of the 20th century, as a crucial societal issue. Considered a “life-structuring concept” in the 60s, the emphasis
on work stress “shifted towards” its “apolitical occupational health aspects” with an emphasis on the “micro-level characteristics as factors affecting work stress” and the “study of specific occupational stress models and/or risk factors” (Väänänen et al., 2012).

Before proceeding to the theoretical backbone of this research, a quick view on the Greek economy during the 2008-2018 decade is worth taking. Up until 2007, the economic statistics were upward trending: Real Gross Domestic Product (GDP) both yearly and quarterly levels were positive and in an up-trending territory; the economic sentiment was above 100 and facing north, and unemployment was in the single digit area. In 2007 the above figures stagnated, only to assume a turn for the worse in 2008: real GDP was at −0.8 at the close of 2008, roughing at −9.2% in 2011 and remaining negative until 2014, only to resume a negative position after the government change in 2015, up until 2017. Similarly the economic sentiment indicator, dropped below 100 on the 30/9/2008, with two lows in 2009 (75.3, with the subsequent request for help by the International Monetary Fund) and 2012 (77.3 where a haircut of 53+% on the Greek Government Debt holders was imposed) only to barely resurface above 100 in 2014, and dropping again below once the government changed, till the end of 2017. Finally, unemployment entered the double digit area in 2009, peaking close to 28% in 2013 and remaining above 20% until 2018. It thus becomes evident that the 2008-2018 decade had a severe toll on both the economic activity, financial stability and prosperity of the country as well as the employment conditions and disposable income of its residents, thus potentially increasing the stress and work stress levels experienced by the Greeks, as can be inferred by such articles as Kalogeropoulou & Papathanasopoulou (2013), Ntelézos et al. (2014), Papaïoánnou et al. (2018), Saridi et al. (2016).

Literature Review

Although stress has been dubbed as “hardship” or “adversity”, since the 14th century (Lumsden, 1981), it was after WWII that it became evident that many ordinary life conditions—for example marriage, growing up, facing school exams, and being ill—“could produce effects comparable to those of combat” (Lazarus, 1993). After WWII the “dominant model was basically that of input (load or demand on systems) and output (strain, deformation, breakdown)” … approached by behaviorism and positivism (Lazarus, 1993). The main interest came from the military to select “stress resistant” soldiers, and “train them to manage stress” and the focus was on explaining and predicting it (Lazarus, 1993). The “stressful conditions did not produce dependable effects” and soon, it was concluded that to “understand what was happening” the “individual differences in motivational and cognitive variables, which intervened between the stressor and the reaction” needed to be taken into account (Lazarus et al., 1952). Cooper and Marshal (1978) define stress as “that quality of experience, produced through a person-environment transaction that, through either over-arousal or under-arousal, results in psy-
chological or physiological distress” (Aldwyn, 2009: p. 24). Pearlin and Schooler (1978) separate between the “stressor” (referring to external events) and “strain” (internal stressful states), Seyle (1976) used “stressor” to denote the agent, and “stress” to denote the reaction”, while Mason (1975) suggested that stress may relate to 3 different situations:

1) Internal state of the organism (or strain: physiological, emotional and cellular reactions);

2) External event (or stressor: duration, rapidity or linkage); and

3) An experience arising from the transaction between the person and the environment, a mismatch between the resources an individual possesses and the perceived challenge or need (phenomenological focus on how stress is perceived/appraised, the perceived characteristics and the severity of the problem).

“Sociologists speak of stress as the disturbing agent (e.g. social disequilibrium; Smelser, 1963) and of strain as the collective reaction (e.g. a panic or riot)” (Lazarus, 1993: p. 4). Cohen et al. (1997) define stress as a “process in which environmental demands tax or exceed the adaptive capacity of an organism, resulting in psychological and biological changes that may place a persons at risk for disease” (p. 3).

Lazarus (1993) concludes that irrelevant of the words used to describe the “stress process” one must always consider 4 different processes to be able to assess the entire process:

1) A “causal external or internal agent, which Hooke (Hinkle, 1973) called a load and others call stress or a stressor”. He emphasized the person-environment relationship and relational meaning;

2) An “evaluation (by a mind or a physiological system) that distinguishes what is threatening or noxious from what is benign”;

3) A “coping processes used by the mind (or body) to deal with stressful demands”; and

4) A “complex pattern of effects on mind and body, often referred to as the stress reaction”.

In doing so, Lazarus tried to define a “load” or “stressor” psychologically, speaking of “several kinds of states relevant to psychological stress and emotion (namely, harm, threat, challenge, and benefit)”, thus abandoning the idea that stress is merely a “form of activation” which ignored many qualitative (physiological and psychological) differences (Lazarus, 1993: p. 4).

It must be noted though that not all forms of (physically felt) stress are unwelcomed. For example, Seyle (1974) makes the distinction between eustress (protective-anabolic) which is the good kind of stress, associated with positive feelings and healthy bodily states and distress (destructive-catabolic) the bad kind, associated with negative feelings and disturbed bodily states. Lazarus (1966) focuses on the temporal qualities of the stressor in defining stress: he distinguishes between harm, threat, and challenge (Lazarus 1966, 1981; Lazarus & Launier 1978; Lazarus & Folkman, 1984). Harm refers to the “irreversible loss” that has already
occurred. Threat is the “anticipation of harm” that has not yet taken place but may be imminent, and challenge resembles the threat, only the person feels confident he/she can overcome the “threat” by effective use of his/her coping resources. Lazarus introduces “different antecedent conditions” in the environment and within the person experiencing stress, that result in different consequences, exhibiting the multidimensional nature of stress (Lazarus, 1993). He explains that “appraisal and coping processes shape the stress reaction”, and that these processes, in turn are “influenced by variables in the environment and within the person” (p. 7), making a point that stress is “process and change” rather than “structure or stasis” (Lazarus, 1993: p. 8). Thus one can determine stress as the felt tension that one experiences combined with a prolonged felt sense of inadequacy, irrelevant of the source of stress. We can infer that stress occurs when bodily tension is felt mentally and/or physically, by a stressor for a variety of reasons, and if the stressor or its perception by the individual is not managed, then we can have a case of stress overload potentially leading to strain from the ongoing stress. Such a strain can keep an individual from living a normal life (APA, 2013) and can lead to multiple illnesses and diseases. One’s job or occupation can be the cause of multiple stressors or strain (Waltz, 2016). Finally, in attempting to quantify and qualify the experienced stress level, the causality of the felt stress is of utmost importance.

According to a report by the American Psychological Association (APA) the top four sources of stress in 2015 were money, work (if employed), family responsibilities, and health concerns (APA, 2015). Work related stress is one of the most important factors of the working life of an individual (Cavanaugh et al., 2000; Chen, W. et al., 2009) and the World Health Organization (WHO, 2015) mentions that occupational stress often stems from unexpected responsibilities and pressures that do not align with a person’s knowledge, skills, or expectations, inhibiting one’s ability to cope.

The occupational stress theory has developed since the 60s, in tandem with the historical and political evolution in the Western societies: the general societal and economic changes influenced the way occupational health issues were considered and work stress was perceived as a major hazard threatening employees’ health and lowering their productivity (Väänänen et al., 2012). Warfare and industrial production were the main initiators of research on stress and work stress, in attempting to locate the psychological knowledge of the “fittest” candidate for a specific (war) task, and identifying how people cope with difficult/stressful conditions (Danziger, 1997; Miller & Rose, 2008; Rose, 1990, 1996; van Drunen, van Strien, & Haas, 2004). The rich findings led to the human resources management movement, shifting the focus from general stress to work stress. With the increasing use of automation and industrialization, there was a shift from production results to the individual person, creating a fertile ground for the humanistic movement; Abraham Maslow (1943) and Carl Rogers (1951) succeeded Taylor and the behavioristic movement, introducing such higher needs as the
esteem and self-actualization which were expected to “increase intrinsic motivation, decrease alienation, and improve well-being” (Väänänen et al., 2012: p. 786), bringing the focus on the well-being of the individual and the working mind in addition to the physical health creating a trend of late modern trends of deindustrialization, democratization, and individualization.

In his 2001 book, Cooper records the different work stress models making a point that in its nature, stress is transactional but most models evaluate and estimate it in an interactional framework (not transactional) since the latter way is easier to measure and analyze, even though attempts have been made to at least recognize within this context the dynamic—adaptational nature of stress. The models he refers to are the following:

**A) Stress Cycle Model** (McGarth, 1987): proposes a sequence of events where the demands of an encounter and its outcome(s) are linked through 3 processes: appraisal (how the encounter is interpreted), decision making (selection of a response), and performance (how well the encounter is managed). There is also the “outcomes process” which he describes as the feedback mechanism through which the encounter is re-appraised. In this model, the imbalance or misfit occurs when the consequences of not meeting the demands are perceived as being significant (McGarth, 1987).

**B) The P-E fit Model of Stress** (French, Caplan & Van Harrison, 1982—on which the Mashlach burnout model is based): the lack of fit between the characteristics of the person (abilities, values) and the environment (demands, supplies) can lead to unmet individual needs or unmet job demands, which in turn result in strain. Subjective P-E misfit (how the individuals perceive the encounter) increase the likelihood that strain will occur. There is little empirical evidence due to problems in clarifying the exact nature of the misfit and appropriately measuring the constructs involved.

**C) Job demands-control model** (Karasek, 1979) focuses on the interaction between “job demands” and “job control” (or “job decision latitude”, defined in terms of decision authority and skill level) as key to explaining strain-related outcomes. High job demands combined with low decision latitude (or perceived inability to influence tasks and procedures at work) result in increased strain. It related perceived control with stress, debates over how control should be operationalized and questions how the interaction should best be measured. Still the findings replication of this model have produced mixed results (Cooper et al., 2001).

**D) General Systems model of Stress approach** (Cox & McKay, 1981) support that the imbalance between the individual’s perceptions of environmental demands and his/her ability to cope with those demands, causes a psychological state of strain. The imbalance occurs in a 5-stage sequence: 1) Source of demand, 2) Perception of that demand in relation to coping resources, 3) The recognition of changes in well-being, 4) The evaluation of coping activities, 5) The feedback/reappraisal of the event. They introduce the concept of stress being an “on-going process which
involves individuals interacting with their environment, making appraisals of that interaction and attempting to cope with it, and sometimes failing to cope the problem that arise” (Cox & McKay, 1981: p.18).

**E) Cybernetic Model for studying work stress** (Cummings & Cooper, 1979) focuses on the stress cycle, “the sequential events that represent the continuous interaction between person and environment (Cummings & Cooper, 1979: p. 415). The basic premises that behaviour is “directed towards reducing deviations from a specific goal state” (Buckley, 1967: p. 53) and that it involves: a) the detection of strain through the presence of a perceived mismatch between the person’s actual and preferred states, b) the selection of an adjustment process, c) the implementation of the adjustment process (that is coping behaviours), d) the effect of those coping behaviours on the stressful encounter (Cooper et al., 2001). It draws attention to the temporal nature of stressful encounters and hence the need to consider the impact of time on P-E transactions (Cooper et al., 2001).

There are several points of convergence in these models (Kahn & Byosiere, 1992) in particular a notion that stress includes:

a) The presence of a demand;

b) A set of evaluative processes through which that demand is perceived as significant and taxing in terms of its impact on individual resources or requiring from the individual something other than normal functioning;

c) The generation of a response that typically affects the well-being of the individual.

The interactional work stress models emphasize the perceived presence of certain conditions that may be associated with a number of stress responses, and also predict that various organizational characteristics, situational factors and individual differences moderate this stimulus-response relationship (Tetrick & LaRocco, 1987). Generally they resulted in 3 types of research applications (Dewe, 1991):

- Identifying, describing and categorizing different stimuli;
- Demonstrating a relationship between the different categories of stimuli and responses;
- Exploring the nature of that relationship by investigating the moderating effects of different organizational, job-specific, and individual-difference variables.

Although the models are not in dispute, there are a number of limitations in their ability to explain the dynamic nature of stress process, leading researchers to question their efficacy (Cooper et al., 2001). They fail to clarify the complexity of the relationship between the person and the environment and do not give full cognizance to the role of the social context within which an encounter takes place (Revenson, 1997). According to Lazarus (1991), they portray an essentially static relationship, where:

1) Adaptation is always synonymous with good fit and maladaptation with misfit (overlooking the fact that the process changes over time and between encounters).
2) They fail to recognize that individuals may cope with one encounter but not with another (assuming some people always function well while others always function badly);

3) Imply that individuals will always respond in the same way to the same (similar) situations (viewing some environments as essentially “good” while others as essentially “bad”).

Identifying aspects of the appraisal process provides the context for exploring the transactional nature of the encounter. The focus then becomes directing research towards the changing nature of the person-environment relationship and re-defining what needs to be measured (Lazarus, 1990: p. 4), considering not only defining and measuring the structural components of the appraisal process but also of the adequacy of contemporary measurement practices in capturing the transactional process itself (Cooper et al., 2001). Adopting the transactional perspective means that no one variable can be said to be stressful because as Lazarus has articulated (Lazarus, 1990), stress “has been defined as a continually changing relationship between the environment and the person” (p. 4). Thus the question arises whether stress research has relied too heavily on psychometric assessment of measurement validity, perhaps at the expense of determining whether the measures actually reflect the reality and experience of those being asked to complete them. Following from this is the more complex question of how the stress process should be investigated (Cooper et al., 2001). For example there the variable-based Spicer (1997), and the person-based (Somerfield, 1997) methods attempting a transactional approach to stress evaluation: the (quantitative, measurable) variable-based methods create a set of constructs reflecting certain aspects of how individuals function; they tend to reduce the dynamics of the stress process to “patterns of empirical relationships [between variables] which can be accommodated in multivariate statistical analysis (Spicer, 1997). On the other hand the (qualitative/descriptive) person-based methods, position the individual (rather than the variables) as the central focus of analysis. Of course there is always the option of Methodological Pluralism, which could better overcome the quantitative/qualitative challenge. Overall, (Cooper et al., 2001) suggests that in trying to approach the work stress factors transactionally, one should consider that:

- Demands and responses can be understood within the context of the evaluative processes that give significance and meaning to the encounters;
- It is through these processes that the individual and the environment are linked;
- It is these processes that best express the relational-transactional nature of work stress;
- Strain occurs when there is an imbalance between the demands of the encounter and the resources of the individual to manage those demands;
- Agreement mainly on the conceptual level and not on the definition and measurement level (Cooper et al., 2001).

Limiting ourselves in the available interactional research on work stress, there
are still some useful findings that are worth mentioning. Based on existing research (Cooper et al., 2001), the job Related Sources of Strain (stressors) can be grouped into 2 categories:

a) Environmental (job-specific sources & organizational sources);

b) Individual (personal sources).

Under environmental sources of strain, Cartwright and Cooper (1997) have further differentiated 6 primary work-related stressors: (1 - 6 = stressors within the workplace, 6 = interplay between the job and life off the job).

1) Factors intrinsic to the job itself, (task context factors (Kahn & Byosiere, 1990)—include vibration & temperature, workload, work hours, new technology, exposure to risks and hazards, etc. (Cooper et al., 2001);

2) Roles in the organization—incl. role ambiguity, role conflict, role overload, responsibility;

3) Relationships at work, such as those with supervisors, colleagues, and subordinates—incl. abrasive personalities, leadership styles, etc.

4) Career development issues—incl. job insecurity;

5) Organizational factors, incl. the structures and climate of the organizations as well as its culture and political environment;

6) The home-work interface.

Although stressors are not confronted in isolation from each other (but rather occur in combination) and there is still a debate on whether the stressors should be investigated “objectively” or “subjectively”, the transactional model of stress emphasizes that perception of a stimulus or event: if a threat is not perceived, there is no strain felt, irrelevant of its presence or not (Cooper et al., 2001). Spector and Jex (1998) makes a case that both subjective and objective factors should be considered, to better understand how the environment affects people’s health and wellbeing.

The stress created by the stressors, can be exhibited by 3 different responses: physical, psychological and behavioural (Kahn & Byosiere, 1992). The new ideals portrayed by newer management approaches, attempted to normalize mentally stressful working conditions, by portraying an employee able to cope with a variety of challenges using specific characteristics present in him/herself and/or his/her micro-milieu (Kugelmann, 1992; Newton et al., 1995: p. 67). Several moderators have been identified, that can facilitating the stressor-strain relationship and building stress resilience:

a) Personality/Disposition:

- Differential exposure perspective/inferential reactivity perspective (Strawski, 2010);

- Negative Affectivity (Watson & Clarke, 1984);

- Trait anxiety (Spielberg, 1972);

- Hardiness (Kobasa, 1982; Maddi & Kobasa, 1984; Orr & Westman, 1990; Snyder et al., 1991);

- Constructive Thinking (Epstein & Meier, 1989);
- Type A personality (Friedman & Rosenman, 1974);
- Self-Esteem & Self-Efficacy (Bandura, 1977; Bandura, 1982; Mäkikangas & Kinnunen, 2003);
- Individual coping mechanisms in a work setting (e.g. Burke & Belcourt, 1974; Cooper & Dewe, 2004: p. 99);
- A sense of Coherence (Antonovsky, 1987);
- Optimism (Hayes & Weathington, 2007; Mäkikangas & Kinnunen, 2003; Scheier & Carver, 1987; Tuten & Neidermeyer, 2004);
- Locus of Control (Parkes, 1991; Ru Hsu, 2011);
- Learned Resourcefulness (Rosenbaum, 1990).

b) Situational Moderators: Perceived control over the environment (Lee & Brand, 2005; Tetrick & LaRocco, 1987);

c) Effects of Social support on stressor-strain relationships (Bliese & Britt, 2001; Carlson & Perrewé, 1999; Ru Hsu, 2011).

- Sources of support;
- Type of support provided;
- Erosion of buffering effects.

New work-stress aspects were analyzed (for example conflicts between work and non-work life (Greenhaus & Beutell, 1985), gender differences in work stress daily recovery (Frankenhaeuser et al., 1989), and balance or lack thereof in effort-reward (Siegrist, 1996) making work-stress an interdisciplinary subject of interest, combining the use of “multidisciplinary frameworks and new psychosocial measures, and for usable practical indicators and tools” (Väänänen et al., 2012: p. 792). At the end of the 20th century, the shift away from the Fordist industrial job description towards knowledge-intensive and service jobs, ensued the “holistic management” of the employees, with such management strategies as job enrichment, quality of work life, etc. (Alvesson & Deetz, 2001: p. 93) including the psychological and emotional management of the employees (Fineman, 2003; Goleman, 1996) increasing the attention on their phenomenology and reinforcing the link between “work stress (emotions), occupational well-being (health), and organizational efficiency (productivity)” (Väänänen et al., 2012: p. 792).

In their article, Decker & Borgen (1993) examined the relationships among five domains in which workers appraise themselves and their work transactions (stress, strain, coping, job satisfaction, and negative affectivity) and showed that higher stress predicted higher strain and lower job satisfaction, even after the effects of the personality disposition of negative affectivity had been controlled and that “with the addition of the six measures of stress to the model, the predictable variance accounted for by stress increased over and above the variance predicted by negative affectivity”. Similarly, Fisher & Gittelson (1983) state that “the workplace has repeatedly been shown to contribute to people’s feelings of well-being or conversely to symptoms and dissatisfaction in their jobs”. Using the above moderators, the physiological, psychological and behavioural strain that can result from stress at work (Johnson & Cooper, 2003) has been substantially...
documented on an interactional level (Cooper et al., 2001).

Due to male domination in the workforce, studies of women and comparisons of both genders have been sparse (Parkes, 1990). Both men and women stress indices peak between the ages of 35 and 39 (Lundberg et al., 1994) and according to Lazarus (1993) keeping the type of stressful encounter constant (work-, health-, or family-related stress) women and men show very similar coping patterns, despite public prejudices to the contrary.

And yet, there are studies showing that the difference in stress experienced by men and women can be attributed both to organismic differences, as well as social/cultural differences in their non-paid family roles, especially when children are involved. Jick & Mitz (1985) suggest that women tend to exhibit higher rates of psychological distress while men are prone to severe physical illness. Specifically women “tend to exhibit the symptomatology of low emotional well-being to a greater extent […] [and] higher rates of psychological and emotional discomfort” (p. 410) across countries and job levels.

Traditional gender roles still remain, burdening women with most of the family tasks; that may be one factor underlying the higher rate of psychosomatic symptoms, medication and sick leave from work in women compared to men (Statistics Sweden, 1990). Even though women reach a high educational level and are increasingly engaged in the paid work force, they continue to have the core responsibility for household and child care (Frankenhaeuser et al., 1989; Gutek et al., 1991; Hall, 1991; Kahn, 1991; ODriscoll et al., 1992; Peck, 1985; Wortman et al., 1991).

Kandel et al. (1985) make a point that family roles create lower strain and stress levels than occupational and housework roles, but when they do occur they have more severe psychological wellbeing consequences than occupational strains and stresses; still, multiple roles modify the stress-generated depression impact by a particular role, “with buffering effects of work on marital stress and exacerbating effects of parenthood on occupational stress” (p. 64).

Sorensen et al. (1987) state that controlling for working hours, type A-behavior is more prevalent in women than in men, but the perceived total workload of a female manager is higher than that of any other group, experiencing a greater role-conflict between paid work demands and duties related to household and family, “despite the fact that only 1/3 of them had children below the age of 16 living at home compared with 2/3 in the other groups” (p. 343). Specifically, women reported higher levels of work overload, stress and conflict than men, directly related with the number of children at home.

Full time employed, white collar women workers “have a greater total workload and experience more stress and role conflicts than men”, and this gender difference “increases systematically with the number of children living at home” (p. 325), especially in families with three or more children, their personal values and high performance standards combined with the expectations of other people and society at large, restrict their choices in this respect (Lundberg et al., 1994).
It is worth noting that women living without a partner, assume more [paid] responsibilities, reporting less role conflicts (Lundberg et al., 1994: p. 325). In Lambert’s paper (1991), relating sex, job conditions, household characteristics, and work responses, she was unable to support the premise that women maintain higher levels of job satisfaction than men because of lower expectations from the workplace; she explained that “the less stressful and more social nature of women’s jobs help compensate for their lack of intrinsic rewards” (p. 360).

Stress from work overload and role conflicts could be an important factor causing more health problems among women than among men (Blechman & Brownell, 1998; Chesney & Ozer, 1995; Orth-Gomer, Wenger, & Chesney, 1998).

Family work allocation between partners is also of essence, but overall, women have the main responsibility for almost all unpaid duties in the home as well as for child care contributing to additional stress and role conflicts (Lundberg et al., 1994). Kessler et al. (1985) also provide clear evidence that the cost of caring burdens women substantially more than men. In the (rare) cases where men break the gender roles and assume home and child care responsibilities, they face similar problems (work overload and role conflicts) still having more freedom on the possibilities to choose between paid and unpaid work duties (Lundberg et al., 1994). Children at home, burden women with a greater work overload and more stress, while the effect on men is often the opposite; it tends to be associated with fewer career opportunities for women but not for men; women have less recreation time and significantly higher norepinephrine levels after work than women without children, while men with children reported more time for recreation (Bekker et al., 2000).

In terms of perceived control, men reported more autonomy in their paid work whereas women reported more control at (unpaid) home work, but when reaching the upper managerial levels, both men and women reported more control over their total work situation and less conflict between demands (Lundberg et al., 1994). Still by matching men and women in educational and occupational level, women aiming at a professional career generally face more stress, work overload and inter-role conflicts than men, which likely contribute to the underrepresentation of highly educated women in higher occupational positions (Lundberg et al., 1994).

Across countries, statistics show that married, full-time working women have a greater workload than men, due to the unequal division of labour at home. (Carlsen & Elm Larsen, 1993; Ekvall, Frankenhaeuser, & Parr, 1994; Frankenhaeuser et al., 1989; Kahn, 1991). Similar gender distinctions were evident in blue- and white-collar workers all over the world verifying that conditions at work and conditions at home interact in ways that create more stress in employed women than in employed men (Aryee, 1993; Barnett & Brennan, 1997; Beena & Poduval, 1992; Conger, Lorenz, Elder, & Simons, 1993; Eckenrode & Gore, 1990; Greenglass, Pantony, & Burke, 1988; Hall, 1990; Lewin-Epstein, 1989; Williams et al., 1997).
And yet, Andreou et al. (2011) using the perceived stress scale (PSS) on the Greek population, found that divorced or widows females exhibited significant higher stress scores compared to singles and especially to married participants, while Haynes and Feinleib (1980) suggest that “regardless of employment status, women reported significantly more symptoms of emotional distress than men” adding that “working women experienced more job mobility than men and more daily stress and marital dissatisfaction than housewives or men” (p. 133). Levenson et al. (2010) confirmed that women tend to experience larger amounts of work change and the relevant stress that accompanies those changes.

Norcross (1990: pp. 218-220) defines psychotherapy as “the informed and intentional application of clinical methods and interpersonal stances derived from established psychological principles for the purpose of assisting people to modify their behaviors, cognitions, emotions, and/or other personal characteristics in directions that the participants deem desirable” (Campbell et al., 2013; Norcross, 1990: pp. 218-220). Jerome Frank (Kubie & Frank, 1961) explains that psychotherapy is a healing relationship which uses socially authorized methods in a series of contacts that involve primarily words, acts and rituals.

Practiced through the ages by medics, philosophers and spiritual practitioners, by 1996 there were more than 250 different psychotherapy approaches (MacLennan, 1996) while at the start of the 21st century the number had grown to beyond 1000 (Feltham, 1997). They can be described using different axes:

i) Medical (DSM V) vs humanistic (holistic/non-medical) model;
ii) One-to-one therapy vs group therapy;
iii) Short-term vs long-term;
iv) Uncovering(depth) vs supportive psychotherapy.

Irrelevant of the type of psychotherapy, there is a multitude of research and meta-analysis providing convincing evidence of the efficacy of psychotherapy in general (Smith & Glass, 1977; APA, 2012; etc.) but also specifically with regards to occupational stress (Li et al., 2017), helping, for example, deal with the role and economic strains, created by life/work events, which erode the positive concepts of self (like self-esteem and mastery), leading to stress and depression (Pearlin et al., 1981). For the purpose of this study 2 different kinds of psychotherapy were chosen: Adlerian, and Person-Centered. Using the above criteria, they fall under the humanistic, long-term, supportive categories (may be applied both in groups and individually). Both therapies are accommodative to the client’s viewpoint, avoiding or accommodating the “psychotherapist-expert” pitfalls (Hekelman & Paulson, 2006). A brief preview follows, to provide the basics for each approach.

Developed around the 1900s by Alfred Adler, a pioneer in the area of holistic theory on personality, psychotherapy, and psychopathology, it is a teleological psychological approach, which views the person as a “creative, responsible becoming” individual, moving towards fictional goals within his/her phenomenological field” (Wedding & Corsini, 2013). Sometimes inferiority feelings may
discourage the individual, leading to a self-defeating life-style. The emphasis is placed on a person’s ability to adapt to such feelings of inadequacy and inferiority relative to others. This is where individual psychotherapy takes it on to encourage the person, in activating his/her social interest and develop a new life-style through belonging, analysis and action methods (Adler, 1966).

In doing that, Adler focused on early childhood memories, in which the family constellation and the child’s struggle to find its place of significance, decode the self-defeating life-style patterns—called private logic (Adler, 1963). In understanding a person, one must understand his/her cognitive organization and life-style, so as to understand the convictions (private logic vs common sense, i.e. conclusions from the individual’s apperceptions or a biased mode of apperception) that this person developed early in life.

The approach is phenomenological: “We can succeed only if we are genuinely interested in the other. We must be able to see with his eyes and listen with his ears. He must contribute his part to our common understanding. We must work out his attitudes and his difficulties together. Even if we felt we had understood him, we should have no witness that we were right unless he also understood.” (Adler, 1931).

According to Adler, behaviour is guided by the goals (forward looking, whether conscious or not) of a person, not a cause (i.e. past/heredity) and the life-style remains constant unless the convictions change. Thus people move forward towards self-selected goals (life tasks) they feel will give them security, a place in the world, preserving their self-esteem. “Life is not a “being” but a “becoming” (Adler, 1963: p. ix). The ultimate goal to be achieved in life has at times been described as “mastery” (Adler, 1926), “superiority” (Adler, 1926), “completion” (Adler, 1931), “self-actualization” (Goldstein, 1939), “self-realization” (Horney, 1951), “competence” (White, 1957) and “perfection” (Adler, 1964); this goal has the purpose of surviving, overcoming life’s problems, contributing to humanity and make the world a better place (Adler, 1964).

Adler distinguished 3 main life-tasks that every person needs fulfill: societal (friends), love-related (family) and vocational (work) (Matheny et al., 2000). These are the 3 pillars on which the psychological wellbeing of every individual rests. In the Individual Psychology, people cannot be studied in isolation: in every interpersonal transaction the focus is on the development of feelings of being a part of a larger social whole, incorporated under the heading of Gemeinschaftsgefühl (=social interest) (Adler, 1964) hence people cannot be studied in isolation, but within all the different constellations (social circles primarily related to the 3 main life tasks) the person exists.

The person must also be approached holistically: in how he/she experiences life, along such axes as un/conscious, mind/body, approach/avoidance, ambivalence and conflict, etc. (Wedding & Corsini, 2013); all these part-functions, are “subordinate functions of the individual’s social goals and style of life” (p. 68). Still the individual has the freedom to choose (non-deterministic) whether he/she
will waste his/her time in useless tasks, feeding his/her need for superiority (neuroticism) or pursue socially useful goals and become task oriented (which is “the iron logic of social living” (Adler, 1959). That is the criterion to identify what the medical profession considers psychopathology (as a phenomenological approach, there is no such categorization in the Individual Psychology, only neuroticisms are described as the state where one becomes significantly non-co-operational, hesitant, or concerned with one’s own superiority). Consequently, because all behaviours are governed by some purpose, psychogenic symptoms must have a psychological/social purpose, while organic symptoms, a somatic purpose (Wedding & Corsini, 2013).

The feelings of inferiority are felt on the onset of birth for each person, whereby each child develops its private logic (Style of Life), in its attempt to take a place of significance. Adler was the first to realize that the birth order of children forges comparable kinds of private logic, which he categorized and labeled (Watkins, 1986). He also gave great emphasis in day/dream interpretation, suggesting that they represent an access to the unconscious part of our private logic. He also spent time studying and exploring such issues as homosexuality, addictions, spirituality and ecology from a psychological viewpoint. His main focus was on parent education, and opened several schools for parents across Vienna. The Adlerian approach is applied in group therapy, couples enrichment programs, schools, teacher-education programs, parent- and family education programs, leadership and organizational psychology, democratic approach to parenting and family.

Thus applying the Adlerian approach theory to our research, the occupational stress is expected to be a result of the feelings of inability/inferiority of the questioned women. By doing Adlerian psychotherapy, they may have identified the flaw/skew of their private logic, thus perhaps altering their behaviour to become more aligned in fulfilling their job description/requirements/necessities (the 3d pillar). Their contribution may have increased their feeling of belonging to the company/job team, perhaps even acclaiming part of the performance of the team, thus creating a positive self-fulfilling prophecy.

Developed in the beginning of the 1940s by Carl Rogers (1942) this kind of psychotherapy seeks to reinforce the self-actualizing tendency (1957), toward growth and fulfillment (Yalom, 1995) through the presence of the following 6 therapeutic conditions:

1) There is Psychological Contact (minimum essential relationship where client and therapist affect each other’s experiential field even if only in a subceived way) (Rogers, 1951).

2) The client is incongruent, experiences distress (vulnerable or anxious (Rogers, 1957)), and this internal pressure, acts as a motivator to: a) engage in productive psychotherapy, b) attempt to become observant and c) proceed to change.

3) The Therapist is congruent but not in an expert/advice-giving role and allowing a human equal contact, so that the client operates “within relationships in a reliable and comprehensible way” (Warner, 2005: p. 103).
4) The therapist exhibits Unconditional Positive Regards (UPR) towards the client’s experience, empowering the client to not judge him/herself, increasing self-acceptance and mollifying any rigidities in his/her conditions of worth (Rogers, 1959). Thus it allows for the observation and examination of the difficult processes, reducing defenses and allowing space for change contemplation. As such, it reinforces the openness to the therapeutic process and forges an alliance with the therapist, thereby increasing the probabilities of therapeutic success.

5) The therapist should also exhibit Empathy reinforcing the role of the companion rather than that of the expert, ensuring the therapist is present in the exact phenomenological perception of the client, creating a deep experiential connection, and giving strength to the client to pursue his/her attempt to explain how things are without censoring things out of fear, guilt or shame. With empathic understanding creates “a real and prizing relationship [which] tends to lower the sense of fear that an individual feels in the face of incongruent experiences” (Warner, 2005: p. 103).

6) The client’s perception (to at least a minimal degree) of the therapist’s UPR, congruence and empathy (Rogers, 1995) is what makes possible a specific kind of encounter and relation which contains no defenses out of fear, shame or guilt and where the client is motivated to focus on, discover, pursue and modify at will, himself, his core values and his way of being (Rogers, 1995). It is the (dialogical) encounter, in which the therapist brings himself fully and interacts in a mutual and transparent way that is “key to the healing process” (Mearns & Cooper, 2005: p. 9).

Of these 6 conditions, the therapist’s Congruence, Empathy and Unconditional Positive regard, are considered the 3 core conditions. Speierer (1998) suggests that incongruence is omnipresent in every individual at some level, but when a tolerable critical level is surpassed, that is where incongruence becomes pathological. Carl Rogers (1957) considers that it is the incongruence between experience and the conditions of worth that determine one’s self-image leading to distress; he supports that this incongruence can be dealt with effectively through the presence of the above 6 conditions, especially empathy, congruence and unconditional positive regards (UPR). Lambers links the “inconsistency of conditions of worth, lack of validation of experience, abuse and emotional neglect” to the inability to form a self-concept, resulting in deriving the sense of self “from the definition others give to his experience”—a very unstable, vulnerable self-concept (in Mearns & Cooper, 2005). Warner in Cooper et al. (2007: p. 154) supports that “PCA does not deny the enormous range of kinds and intensities of human distress … But it does deposit deep capacities for self-healing inherent within the human organism that apply across human experiences that seem very different on the surface”. Again we have a purely phenomenological approach, where we are only concerned with what the client perceives as his reality, and the only link to a “different reality” is the “reality” of the psychotherapist, through his congruence.
Thus applying the PCA approach theory to our research, the occupational stress is expected to be a result of the inability of the women asked to adapt/the incongruence created between the experiences at work and their values/self-concepts. What PCA is expected to have created, in comparison to the women who have not had any psychotherapy, is a reduction of their defenses, the adoption of a more expansive/extentional way of thinking, reacting and evaluating, which may have resulted in a more accurate symbolization of the experience, eventually moving the locus of evaluation further within each women, becoming more fluid in processing distressing experiences and reducing/resolving the anxiety, tension and psychological maladjustment to the stressful experience(s) at work.

In terms of its efficacy, Carl Rogers consistently measured the effectiveness of his method, and was very focused on the measuring techniques always citing the results. He applied the person-centered therapy approach to groups, severe psychopathology, schools, teachers, businesses and even politics and more. Gibbard and Hanley (2008), covered a 5-year period to show the effectiveness of PCA in routine clinical practice in primary "with common mental health problems, such as anxiety and depression" but “not limited to individuals with mild to moderate symptoms of recent onset, but [extending to] to people with moderate to severe symptoms of longer duration” (p. 215). Stiles et al. (2008) showed in their research that PCA had similar results to CBT and psychodynamic psychotherapy in UK primary-care routine practice. Choimes (1984) through her research shows that PCA increases self-acceptance.

Carl Rogers was a student of Alfred Adler for a couple of years (1927-1928); although their approaches may appear quite different on the surface, they do share a multitude of similarities (Watts, 1996).

First of all they are both phenomenological, in that they are both interested in identifying how the individual client/patient perceives the world and him/herself, and not in once universal commonly perceived truth. They both focus on the here and now, and the past is of interest only as a comparison to how the client/patient perceives his current status—as a measure of change/progress. The extent of irrelevance of the past, can be identified in Roger’s words: “Alfred Adler [among others] lectured to us, for example, and shocked the whole staff by thinking that an elaborate case history was not necessary. I remember how misinformed I thought he must be, since we routinely took case histories fifty to seventy pages in length”. […] “It took me some time to realize how much I had learned from him (Roger, 1967: p. 357).

Both approaches are targeted towards self-understanding, self-knowledge and self-evaluation. Thus the client/patient is the driver of the psychotherapeutic session, towards the direction of his/her choice, towards a meaningful (for him/her) destination (self-actualization); the role of the psychotherapist is ether to implement the 6 therapeutic conditions (PCA—Rogers, 1957) and/or proceed with the Socratic Method (Watts, 1998). Indeed Watts makes a strong case of the similarity of the 6 core conditions to Adler’s social interest, especially with regards
to the role of the therapist (Watts, 1998). As a result both approaches are based on cooperation, respect, empathy, encouragement and real care towards the client/patient. This means that in both cases the therapist is considered to be co-learner and of equal status to the client/patient, banning any imposition rights, derived from the status of expertise (for example the couch in psychoanalysis) (Adler, 1966), and negating the use of evaluation and diagnosis for the patient (Fiedler, 1950). They both accept the metapsychological perspective, in a holistic way, as well as the unconscious (but only for the purpose of identifying behavioural patterns that are to be brought to the conscious side (edge of awareness) and not for interpretational reasons).

In Car Roger’s words, “I had the privilege of meeting, listening to, and observing Dr. Alfred Adler... Accustomed as I was to the rather rigid Freudian approach of the Institute-seventy-five-page case histories, and exhaustive batteries of tests before even thinking of “treating” a child was shocked by Dr. Adler’s very direct and deceptively simple manner of immediately relating to the child and the parent. It took me some time to realize how much I had learned from him”. (cited in Ansbacher, 1990: p. 47)

2. Method

This research attempts to identify whether Person Centered Psychotherapy (PCA) and/or Adlerian Psychotherapy (AP) have any positive effect on reducing the work stress levels experienced by women working in the area of Athens, in Greece.

2.1. Research Design and Variables

This research is based on the transactional Cooper & Marshall (1978) stress model, considering the continuous cycle of interactions between the person and the environment (encompassing the impact of time) (Cummings & Cooper, 1979), extending beyond the simple identification of the key aspects of an encounter (Cooper et al., 2001). Phenomenological in nature, it emphasizes the subjective (rather than objective) perception of a stimulus or event by the individual with a focus on the nature of the misfit, and more specifically whether it is perceived as salient and significant, representing a threat to the person’s well-being and requiring actions over and above the normal functioning (Cooper et al., 2001).

In this study, the Cooper & Marshall (1978) stress model, is blended with additional stress input research, focusing both on the identification of the stressors/hazards in the work place, and the individuals most prone to be harmed by them (Faragher, E. B. et al., 2004). Emphasis is given on findings on such issues as poor colleague/superior relationships, isolation, unfair treatment (Industrial Society, 2001; Kahn et al., 1964), job satisfaction (Warr’s (1990)) Job Satisfaction Scale) (Lyne et al., 1994), studies on overload and stress symptoms (French, Caplan, & Van Harrison, 1982; Industrial Society, 2001), control over the organization and performance of a job (Makin et al., 2000), job security (O’Driscol & Cooper, 1996), training, equipment, resources, feedback on their work and being valued...
M. Galanakis, A. Anastasopoulou

(HSE, 2000; Industrial Society, 2001), the conflict between work, personal, home and social life (Confederation of British Industry, 1998; Industrial Society, 2001), pay and benefits, commitment of the employee to the organization and the perceived opposite, physical and psychological health (Faragher et al., 2004). Considered as a screening tool, “capable of measuring simply and efficiently the extent to which individual employees are currently exposed to a range of common workplace stressors” (Faragher et al., 2004: 192), it is comprised of the 4 following sections (in parentheses the subdivisions of each category:

1) **Perceptions of Your Job** (Work relationships, your job, overload, control, job security, resources and communication, work-life balance, pay and benefits);

2) **Attitudes towards Your Organization** (perceived commitment of company to employees and commitment of employee to the company);

3) **Your Health** (physical health, psychological well-being);

4) **Supplementary Information** (demographic, biographical and stress related data).

The first two sections are rated on a six point Likert-type scale while the third one on a four point Likert type scale. The fourth section provides qualitative data offering information on the subject’s current job, family, lifestyle and interests, acting as a source for potential physical health and psychological well-being symptoms/signs detection. Out of the 4th section, 7 different items were selected, with the criterion of being easily measured/compared, and for the purpose of being checked as a control variable.

Consequently the relevant variables are the following ([Figure 1 & Figure 2](#)):

![Figure 1. Research design and variables.](#)
The way stressors are considered to operate is depicted in Faragher et al. (2004) as follows:

The purpose of the present study is to examine whether therapy helps the reduction of occupational stress levels in Greek women. Our main research questions are:

1) Does therapy lead to better occupational stress coping results in comparison to the absence of therapy?
2) Which psychotherapeutic approach leads to better occupational stress level reduction, Adlerian or Person Centered?

2.2. Sample

We collected primary data through a questionnaire based survey, conducted between October 2018 and March 2019. The questionnaire was given to 250 actively working women, aged between 25 & 55, of whom 178 responded and can be divided in 3 different groups: the first one includes women who have had at least 6 months of Person-Centered psychotherapy (PCA), the second group had at least 6 month of Adlerian-Individual psychotherapy (AP) and the last one has never had any kind of psychotherapy (NoΨ). The minimum 6 month psychotherapy quota was determined, among others, by the van Rijn, B. V. & Wild, C. (2013) study, which showed for different approaches that within 6 months of psychotherapy there is, on average, significant measurable improvement. With regards to the average years of psychotherapy of the first 2 groups, the first group has had an average of 4.31 years of PCA, while the second one 4.10 years of AP. The first 2 groups comprised of 59 individuals each, while the 3d one of 60.

2.3. Tools/Measures

The ASSET Questionnaire

The scaled (for Greece) ASSET (A Shortened Stress Evaluation Tool—Faragher E. B. et al., 2004) self-report questionnaire was used for this survey. This ques-
tionnaire was selected among a wide variety of occupational stress questionnaires, because it is scaled for the Greek Population, it is “validated and reliable, with proven psychometric properties”, “it is constructed using items directly pertinent both to the hazards/stressors and the moderating/mediating factors likely to be found” on the stressor-strain relationship (Faragher E. B. et al., 2004: p. 191), and it is shorter than the OSI-R. Actually the ASSET questionnaire is considered a “screening” questionnaire, based on which the people scoring high on the stress factors, are then prompted to complete a much longer and detailed questionnaire, such as the OSI-R. The ASSET questionnaire comprises of a set of questions measuring the exposure of the individual to a range of common workplace stressors, also addressing the issue of perceived organizational commitment to and from the individual, and some qualitative inquiries addressing the potential existence of signs and symptoms of both physical health and psychological well-being” (Faragher E.B. et al., 2004: p. 192).

The questionnaire has been successfully tested for face, construct and convergent validity (Faragher, 2004). With regards to face validity the questions are well examined, ensuring in its construction that the language and meanings used is were confirmed to be “acceptable to all grades and types of employees” (Faragher et al., 2004: p. 193). Convergent validity was assured through a very strong positive correlation between ASSET and the General Health Questionnaire—12 (GHQ-12) (Johnson, 2001), and a very strong negative correlation between Warr’s (1990) Job Satisfaction Scale. As far as construct validity is concerned, the Cronbach alpha reliability measure was used. Due to the smaller sample size in this paper, the Cronbach alphas are (mostly) lower, but still remain above the significant 0.60 threshold (Alphas = 0.63 - 0.85).

2.4. Procedure

The questionnaire distribution process was diverse enough (companies, universities, random printed questionnaires on the street, psychotherapy groups, Facebook, e-mailing, college student and professors, the airport, shopping malls, etc.), to ensure that all subjects be diverse in the following areas (control variables): employment type, employment years, age, family status, presence of children (both below and above 18), education, hobbies and exercising.

The subjects received:

- An information sheet with all the relevant information on how their input questionnaires will be used;
- A consent form (explaining the use of their responses and where that use is limited;

3. Results

For the purpose of this study the following analyses were used: Descriptive statistics, ANOVA analysis and Regression analysis. The Sorbel Test was used to check for mediation. All statistical analyses were performed using the Stata (Software for Statistics and Data Science program) software.

3.1. Descriptive Statistics

Care was given that the questionnaire would reach the maximum possible (within the time limits) participants, with as many methods as possible, to avoid missing a possible representative group of the Athens area.

With regards to the respondent sample, the average age of all three group participants is around 37, approximately half of the sample in each group is either married or lives together with their partner/companion (who mostly works full time—between 92% - 97%), and the participants who have children (married, divorced or widowed) have an average of a bit less than one child (averages 0.81 - 0.83).

More than 80% of the participants hold a bachelor degree or higher, and on average they have been working in the same job/company/role for the past 9 - 11 years, between 37 - 40 hours per week (2 - 3 hours more than contractually agreed).

Job descriptions included (Table 1) are quite diverse, both within each group, as well as the entire sample, ranging from secretarial, employee, technical, supervisory, freelance, sales, marketing, management, counselling, teaching, legal, banking, self-employed and more.

Socially, those doing psychotherapy tend to mingle socially with their colleagues more (PCA 64%, Adlerians 75%) than those who have never had any kind of psychotherapy (52%) and many participants, in all three groups, tend to have some kind of hobby, (PCA 74%, Adlerians 85%, NoΨ 77%).

In terms of productivity (Table 2), those who have never had any psychothe-
therapy score best, feeling that in the last 3 months, only 30% have been less than 80% productive at work, followed by the PCA (44%) and the Adlerians (53%).

The participants who have had Adlerian psychotherapy stand out in finding time to relax (61%) versus their peers, count more smokers (37%) and alcohol drinkers (66%) than the other groups, but also are the most systematic in regular exercising (39% vs 29% - 30%) though less than 13% in all 3 approaches considers exercising a part of their routine.

As far as their perceived health is concerned, only 12% of the participants faced some significant illness in the past 6 months (half of them belonging to the PCA group). 97% of the respondents believe their health is good or “ok”, and of those that believe their health to be bad, the majority come from the group that has not had any psychotherapy (67% though comprised of only 4 participants out of 6). 49% of the respondents have not taken a sick leave from work in the past 3 months, reducing the average of the sample to 1.25 sick leave days; the Adlerian group appears to be the “healthier” with 64% taking no sick leave days (vs 37% - 47%), while the PCA group counts the larger group of people who have taken at least 1 sick leave day in the past 3 months (37 vs 21 & 12). As a result 54% of the respondents have not been to the doctor in the past 3 months, again the Adlerians scoring only 21 respondents with doctor visits (vs 30 for the other 2 teams. 52% of the sample have faced a very stressful event in the past 6 months, the majority of them (46%) belonging to the PCA group.

**Table 1.** Sample distribution regarding job description/role.

<table>
<thead>
<tr>
<th>Job Descriptions</th>
<th>PCA</th>
<th>AP</th>
<th>NoΨ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specialized/Manual Work</td>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Employee/Secretarial</td>
<td>13</td>
<td>18</td>
<td>22</td>
</tr>
<tr>
<td>Call Center-Shop Assistant</td>
<td>0</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Supervisory</td>
<td>4</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Technical</td>
<td>3</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Director</td>
<td>10</td>
<td>12</td>
<td>7</td>
</tr>
<tr>
<td>Sales/Marketing</td>
<td>11</td>
<td>7</td>
<td>14</td>
</tr>
<tr>
<td>Other</td>
<td>16</td>
<td>14</td>
<td>10</td>
</tr>
</tbody>
</table>

**Table 2.** Sample distribution regarding self perceived productivity in the previous 3 months.

<table>
<thead>
<tr>
<th>Self-Perceived Productivity in the past 3 months</th>
<th>PCA</th>
<th>AP</th>
<th>NoΨ</th>
</tr>
</thead>
<tbody>
<tr>
<td>100%+</td>
<td>4</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>90% - 100%</td>
<td>13</td>
<td>12</td>
<td>7</td>
</tr>
<tr>
<td>80% - 90%</td>
<td>16</td>
<td>9</td>
<td>32</td>
</tr>
<tr>
<td>70% - 80%</td>
<td>15</td>
<td>16</td>
<td>16</td>
</tr>
<tr>
<td>Less than 70%</td>
<td>11</td>
<td>15</td>
<td>2</td>
</tr>
</tbody>
</table>

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3.2. Anova Tests

One Way ANOVA of 3 Cumulative Stress Factors vs the 7 Control Variables

The first step to analyzing the data was to perform a one way analysis of variance (1-way ANOVA) on the 12 factors, using the following qualitative data as controls/independent variables (in parentheses the answering options of the participants):

1) Number of children (numeric);
2) Practice of regular exercise (1: never, 2: not usually, 3: sometimes, 4: frequently, 5: always);
3) Presence of stressful event(s) in the past 6 months (1: yes, 0: no);
4) Presence of a hobby (1: yes, 0: no);
5) Educational level (1: School, 2: Professional School, 3: Bachelor, 4: Master’s Degree, 5: PhD);
6) Family Status (1: married, 2: live with partner, 3: single, 4: divorces, 5: separated, 6: widowed);
7) Perceived health (1: good, 2: ok, 3: bad).

The main statistics of the control variables can be seen in Table 3.

Initially, each of the 3 major factors, were examined through a one-way ANOVA against every one of the control variables. Since this is a multiple comparison test, an additional Bonferroni adjustment is made to avoid an erroneous indication of statistical significance. Table 4 links the stress factor to the control variable that indicated a significant p-value.

In the specific sample, the control variables that affect all 3 factors are the following: the presence of a hobby, exercising (though the frequency varies) and perceived health (again the perception of the health level is not constant for all 3 factors). The presence of children (specifically 2 as opposed to none) and being single increases the stress created through the attitude towards the organization factor, while with regards to the health factor, the occurrence of stressful events in the last 6 months, tends to have its toll (education level is not supported by the Bonferroni adjustment). Again the p-value indicates the level of importance of each control variable.

Table 3. Anova descriptive data regarding the 7 control/independent variables.

<table>
<thead>
<tr>
<th>Control (Qualitative/Descriptive) Data</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Children</td>
<td>0.82584</td>
<td>1.01848</td>
</tr>
<tr>
<td>Exercising</td>
<td>3.02809</td>
<td>1.17136</td>
</tr>
<tr>
<td>Stressful event in the last 6 months</td>
<td>0.52247</td>
<td>0.50090</td>
</tr>
<tr>
<td>Hobby</td>
<td>0.78652</td>
<td>0.41092</td>
</tr>
<tr>
<td>Education Level</td>
<td>3.43258</td>
<td>0.81543</td>
</tr>
<tr>
<td>(Marital) Status</td>
<td>2.33708</td>
<td>1.41776</td>
</tr>
<tr>
<td>Perception of own Health</td>
<td>1.52247</td>
<td>0.56454</td>
</tr>
</tbody>
</table>
Table 4. Anova results regarding the effect of the 7 control variables on the dependent variables.

<table>
<thead>
<tr>
<th>Factors</th>
<th>MEAN</th>
<th>STANDARD DEVIATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASSET total added average, divided by the number of questions per factor in ASSET</td>
<td>ASSET Questionnaire (9169 individuals)</td>
<td>Greek Women Sample (178 individuals)</td>
</tr>
<tr>
<td>Perception of your job</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Work Relationships</td>
<td>19.3/8 = 2.41</td>
<td>2.56</td>
</tr>
<tr>
<td>Your Job</td>
<td>12.5/4 = 3.13</td>
<td>2.9</td>
</tr>
<tr>
<td>Overload</td>
<td>12.9/5 = 2.58</td>
<td>2.7</td>
</tr>
<tr>
<td>Control</td>
<td>10.5/4 = 2.63</td>
<td>3</td>
</tr>
<tr>
<td>Job Security</td>
<td>12.3/4 = 3.08</td>
<td>3.13</td>
</tr>
<tr>
<td>Resources and Communication</td>
<td>12.3/4 = 3.08</td>
<td>2.69</td>
</tr>
<tr>
<td>Work-life Balance</td>
<td>25.1/4 = 6.28</td>
<td>2.95</td>
</tr>
<tr>
<td>Pay and Benefits</td>
<td>3.5/1 = 3.50</td>
<td>3.5</td>
</tr>
<tr>
<td>Attitudes towards the Organization:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perceived Commitment of the Org. to the Employee</td>
<td>20/5 = 4.00</td>
<td>3.12</td>
</tr>
<tr>
<td>Commitment of Employee to the Organization</td>
<td>18/4 = 4.50</td>
<td>3.2</td>
</tr>
<tr>
<td>Your Health:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physical Health</td>
<td>14.2/6 = 2.37</td>
<td>2.67</td>
</tr>
<tr>
<td>Psychological Well-being</td>
<td>24/11 = 2.18</td>
<td>2.16</td>
</tr>
</tbody>
</table>

3.3. One Way ANOVA of 12 Individual Stress Factors vs the 7 Control Variables

A more elaborate analysis can be achieved by running the same one way ANOVA, with a Bonferroni adjustment for the individual sub-factors of each of the 3 major factors as shown in Table 5 below. The following table indicates the interesting p-values.

Overall the results of the previous ANOVA test are confirmed, and further analyzed into the specific constituents of each major category that are affected by each control variable. In the specific sample, the control variables in order of importance begin with the presence of a hobby, which affects 10 out of the 12 factors, followed by the health perception of the participants (affecting 9 factors), whether they exercise (6 factors), the presence of a stressful event in the past 6
months (5 factors) while family status and the existence of children seem to be of lesser importance.

In a similar way, the ANOVA test is used to identify whether the presence (or absence) of psychotherapy (2 kinds, Person-Centered—PCA- and Adlerian-Adler) affects the 3 major factors and subsequently, the 12 sub-factors as shown in Table 6.

Surprisingly, PCA is shown to have no significant effect on any of the 3 major factors; its effect can be suspected (though the significance is border line) on the “work-life balance” and “control” sub-factors. On the other hand, Adlerian psychotherapy is shown to affect significantly the “Psychological Wellbeing” sub-factor of the “Your Health” principal factor.

3.4. Regression Analysis

A preliminary regression of the therapy options and the control variables on the factors (both major and sub-factors) gives a more detailed view on all the existing, significant relations.

Indeed the regression verifies that person-centered psychotherapy has some effect on the sense of control and work-life balance the participants feel ($p < 0.10$) while Adlerian psychotherapy affects somewhat the psychological wellbeing of the individual (again $p < 0.1$). Based on the above results, when one is faced with the choice between the two kinds of psychotherapy, one could choose PCA, to focus one's sense of control and work-life balance, while shift to Adlerian to focus on the overall psychological wellbeing.

The ASSET questionnaire data provide additional information, on which control factors can improve the result of each kind of psychotherapy. Regressing each kind of psychotherapy to the control factors one can identify the following separate the following factors in each treatment:

1) Adlerian Psychotherapy:
   a) Attitude towards the Organization with a quite low coefficient of determination ($R^2: 0.2038$, and adjusted $R^2: 0.1219$):  
      i) Marital Status:  
         1) Married ($p$-value 0.08);  
         2) Divorced ($p$-value 0.041).
   b) Your Health (physical and psychological) with a still low but relatively higher coefficient of determination ($R^2: 0.2930$, and adjusted $R^2: 0.2204$):  
      i) Existence of stressful event in past 6 months ($p$-value 0.002);  
      ii) Education Level ($p$-value 0.03);  
      iii) Marital Status: living with a partner (but not married) ($p$-value 0.001).
   c) No control variable affected the (inexistent) effect of the Adlerian psychotherapy on the “Perception of your Job”.

2) Person-Centered Psychotherapy:
   a) Attitude towards the Organization with a very low coefficient of determination ($R^2: 0.1724$, and adjusted $R^2: 0.0873$):  
      i) Presence of a hobby ($p$-value 0.04);  
      ii) Marital Status: Married ($p$-value 0.106).
Table 5. Anova results of the 12 stress factors vs the control variables.

<table>
<thead>
<tr>
<th>Factor</th>
<th>Control</th>
<th>p-Value (Prob &gt; F)</th>
<th>Comments</th>
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<td></td>
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<td></td>
<td>-bad</td>
<td>0.02</td>
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<td>Stressfull Event</td>
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<td>no such indication on Bonferroni individual results</td>
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<td><strong>Partner</strong></td>
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</tr>
<tr>
<td></td>
<td>-bad</td>
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</table>

*no such indication on Bonferroni individual results*
**Table 6.** Anova results on the effect of Therapy on health, well-being and work-life balance.

<table>
<thead>
<tr>
<th>Psychotherapy</th>
<th>Factor</th>
<th>$p$-Value (Prob &gt; F)</th>
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</tr>
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<td>PCA</td>
<td>Adler</td>
<td>Your Health</td>
<td>0.0783</td>
</tr>
<tr>
<td></td>
<td>No Therapy (No Ψ)</td>
<td>Your Health</td>
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<td>PCA</td>
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<td>Psychological Wellbeing</td>
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<tr>
<td>No Therapy (No Ψ)</td>
<td>Psychological Wellbeing</td>
<td>0.0859</td>
<td></td>
</tr>
</tbody>
</table>

b) Your Health (physical and psychological) with a still low but a little improved coefficient of determination (R-squared: 0.2593, and adjusted R-squared 0.1832):

i) Existence of stressful event in past 6 months ($p$-value 0.002);

ii) Presence of a hobby ($p$-value 0.0638);

iii) Education Level ($p$-value 0.03);

iv) Marital Status: married ($p$-value 0.074).

c) No control variable affected the (inexistent) effect of the PCA psychotherapy on the “Perception of your Job”.

The final step is to combine the statistically significant control variables that affect the important stress factors in each approach. We get the following results:

### 3.5. PCA Psychotherapy

1) Work-Life Balance:

a) We have already identified as per the specific sample of this study, that the control variables that affect Work-Life Balance in a significant way are as shown in Table 7.

b) Regressing the above control variables on work-life balance, with the addition of the presence of at least 6 months of PCA one can derive the following results:

i) PCA therapy is confirmed to affect work-life balance significantly ($p$-value 0.059);

ii) The presence of a stressful event in the last 6 months to a person doing at least 6 months of PCA does not have a serious impact on the Work-Life Balance segment of his felt stress at work ($p$-value 0.313);

iii) Neither does adding a hobby to the person doing PCA ($p$-value 0.2260);

iv) The way a person perceives his health, when that person is doing at least 6 months of PCA does have a significant impact on how that person reports his work-life balance to be (PCA $p$-value 0.07, and perceived health $p$-value 0.055 although there is a low adjusted R-square 0.0446);
v) When someone is doing at least 6 months of PCA, the perception of his health plays a significant role on his work-life balance (perceived health has a p-value of 0.082, with a very low adj. R-squared: 0.0430), but at the same time, the presence of a hobby does not (p-value 0.371);

vi) Finally when someone does at least 6 months of person-centered psychotherapy, if a stressful event occurs, that person has a regular hobby and perceives his health to be ok, it is the health perception that appears to be the most important control variable (p-value 0.102) although it is marginally significant and with a low adj. R-squared (0.0385);

vii) It should be noted that the adjusted r-squared maximizes when regressing PCA with the presence of a hobby and a good health perception (adj. r-squared 0.0430). If we add to the above control variables the presence of a stressful event, the adjusted r-squared drops to 0.0385. Still both figures are very low to provide any conclusive remarks;

viii) PCA therapy is confirmed to affect the sense of control significantly (p-value 0.051);

ix) People who have had at least 6 months of PCA therapy, are further influenced by the presence of children, although this influence is marginally significant: only the 5 children have a p-value lower that 0.10 (0.045) and a very low adjusted r-squared value (0.0760). Given there was only 1 respondent with 5 children, the statistic is not very dependable.

### 4. Discussion

Comparing people who have had at least 6 months of Adlerian psychotherapy to those who have had no psychotherapy at all, on their psychological wellbeing, accounting for the above control factors one can derive the following conclusions:

i) Adlerian therapy is confirmed to affect psychological wellbeing significantly (p-value 0.045, although the adj. r-squared is very low: 0.0256);

ii) People doing Adlerian psychotherapy do not appear to gain extra benefits from exercising in their psychological wellbeing (p-value 0.349), and their educational level does not have a significant influence either (p-value 0.403);

iii) However, despite their Adlerian psychotherapy, their psychological wellbeing appears to be affected by a stressful event within the last 6 months appears (p-value 0.013, again with a very low adjusted r-squared: 0.068), and so does their health perception (p-value 0.000, with an adjusted r-squared value a bit higher (0.1465));
iv) When we add both stressful event and the perception of health, the health perception (0.0000 appears to influence more the psychological wellbeing of the people who do Adlerian psychotherapy, than the presence of a stress full event (0.04) though both remain quite significant (and the adjusted r-squared goes to 0.1703);

v) Finally, testing all the relevant (with the psychological wellbeing factor) control variables in the regression, against the respondents who have had at least 6 months to Adlerian Psychotherapy, the results remain more or less the same, with perception of health being the most significant influence (0.000) followed by the presence of a stressful event (and the adj. r-squared maximizes to a 0.20 level).

The general conclusion of this research is that psychotherapy does have some effect on the stress levels experienced by women in the workforce in Athens. Both psychotherapy approaches affect the occupational stress level of the respondents, although each in a different stress-related area.

Person-Centered psychotherapy seems to affect mainly the perception one has for one’s job, and more specifically the work-life balance and job control components of this job perception, while Adlerian psychotherapy appears to affect the psychological wellbeing one has while working on one’s job. Faragher, E.B. et al. (2004) mention that Job Control correlated highly with Psychological health (but not physical), suggesting that possibly the effect of both psychotherapies may be intertwined in the effects, and calculations of each stress component. Also, Karasek (1979) suggests that having low job control has a major impact on all health facets, something that reinforces the above argument, even though Faragher et al. (2004) support that job satisfaction has a higher correlation to the health component.

There is room for further investigation in understanding/evaluating the combination of the nature of each psychotherapeutic approach to the stress-related factor they appear to affect: PCA, inducing acceptance aids in how the respondent perceives her work-life balance, and her control in the job, while Adlerian Psychotherapy, which increases the encouragement of the individual (Choimes Karagianni, 1984) positively affects the psychological wellbeing of the respondent.

Still the statistics the above conclusions are based on, are not very strong, and that could be attributed to the specificity of the sample (Athens area only), and the small number of the participants (178, compared to 9,169 the ASSET questionnaire is based on). Nevertheless Adlerian statistics tend to imply a stronger relationship to the stress components than the Person-Centered ones (although as mentioned, still quite weak). Even comparing the basic normative figures between the original ASSET population and our samples, the numbers appear to have some discrepancies. This suggests that further analysis needs to be done, with a greater sample to either strengthen or abolish the aforementioned conclusions.

It would also be interesting to repeat this research in 10 years time, when the present crisis will hopefully be long gone and forgotten and see whether there was a shift in the stress perception of the people in Greece.

Also, comparing the equivalent responses of the male Athens population,
could provide substantial results for comparison in the gender inequality gap of felt/self-reported stress.

Overall, the present study, may be used as a stepping stone in further elaborating the female stress in crisis-stricken countries (or extended to different regions in Greece, to compare how the women in each region experienced occupational stress), the effect the economic cycle may have on the occupational stress of women, how psychotherapy affects the employment stress women feel, or, if compared with an equivalent male population outcome, the difference of the felt stress between men and women in Greece, at the end of an economic crisis.

Conclusion/Limitations/Future Directions

Some limitations of this study center around the questionnaire employed and the sample used and provide opportunities for further elaboration.

With regards to the questionnaire, one needs to keep in mind that this is a preliminary questionnaire, hence it would be advisable to deepen the research in each category investigated, and especially in the 3 stress factors identified (work-life balance, control, psychological wellbeing), with more specialized questionnaires. This could help further understand specifically which aspects or subcomponents of control, work-life balance and psychological wellbeing are specifically affected by each psychotherapy approach, and better delineate the effects each psychotherapy approach has on occupational stress.

The questionnaire was built and tested some 10 - 15 years ago, based on the Cooper & Marshall (1978) stress model, considering several other contemporaries at the time issues. Although the time that has elapsed has contributed to the verification of the validity of the questionnaire, there may be some lag in the more recent occupational stress findings, for example bullying.

Also the test is a self-reporting tool. This is compatible with the phenomenological approach of both psychotherapy approaches examined, since the purpose of this study is to identify the self-perceived stress-related improvement that each individual reports. Nonetheless there is always room for some placebo effect, especially with the individuals that “recently” started psychotherapy. This is why the 6 months minimum bar was used (Rijn, B. V. & Wild, C., 2013), but given the non-linearity of the psychotherapeutic process/improvement and the fact that the respondents did not attend psychotherapeutic sessions targeted necessarily towards work stress, but on whichever issue they chose to tackle, that there is always room for some misrepresentation of the final results.

Moreover, the fact that the specific questionnaire “attempts to elicit self-report estimates of both the causes and effects of workplace stress”, may inflate any relationship present “by common method variance—associations (correlations) between the causes and effects of stress may be over-estimated due to individuals answering all sections of the questionnaires in a set way (e.g. through having a tendency to respond positively to questions). Shared variance with a third factor may inflate the relationship (e.g. an extraneous factor may determine both the extent to which an individual experiences certain stressors and the level of stress
they experience) (Faragher, E.B. et al., 2004: p. 199; Lyne et al., 1994).

Finally, the intentionally "simplistic" scoring method of the stress scales (simple addition of scores, without for example varying weights showing the relative importance of each factor considered) which was meant to keep the questionnaire scoring simple, begs additional evaluations, using more comprehensive/specialized scoring tools for a better and more elaborate psychometric evaluation.

With regards to the sample used, emphasis is given to the small size of the sample. Comparing the normative data of the ASSET Questionnaire to our sample, some stress factors vary significantly. This could be attributed to the specificity of the characteristics of the sample or other parameters, but it is of importance to mention that the sample of this study is 1.9% the size of the original ASSET questionnaire sample.

Furthermore, although care was given to the diversity of the group, it still remains elusive whether some specific representational groups of the Athens population might be missing. Again this may be related to the sample size concerns. It should also be added here that because the questionnaires were distributed in several random ways, the lack of a controlling environment leaves further room for inconsistencies perhaps affecting the respondent’s answers.

Another issue that may limit the ability to generalize the findings of this study is the fact that this is not a longitudinal research; the respondents were approached in the fall of 2018-spring 2019, when the economic crisis was trending towards its end. As a result one may speculate that this is the peak time for the occupational stress to be measured (the individuals having undergone the entire crisis), but the opposite may as well be valid (silver-lining hope at the end of the tunnel). Given the interaction of so many factors at play, to infer cause-and-effect relationships, a longitudinal research should be employed, accounting not only for the time lag in each respondent’s stress perceptions and the organizational aggregate, but also the economic situation of the country and several cultural elements.

The impact of occupational stress is well known, especially on the financial and human resources costs front; stress has been identified and studied for almost a century now, and occupational stress has been at the center point for the past 50 years. This study covered the theoretical backbone of stress, occupational stress, & the differences in how it is experienced by women and investigated how person-centered and Adlerian psychotherapy may affect the felt occupational stress of women, using the ASSET questionnaire, on 178 women, residing/working in Athens. The results indicate that both psychotherapy approaches have an effect on the perceived occupational stress, and more specifically, that Adlerian psychotherapy influences positively the psychological wellbeing of the individual, while Person-Centered Psychotherapy has a positive effect on the perceived job control and the work life balance of the respondent. This is consistent with the nature of the psychotherapy methods (Choimes Karagiannis, I., 1984), opening the way for further investigation either towards the exact mechanisms each psychotherapy approach uses, or the overall study of work stress, on women, in Greece or after a completion of an economic crisis.
Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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