

The Impact of Stress on the Productivity of Research Assistants in Eastern Mediterranean University

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ABSTRACT

The idea of stress has always been an important subject studied by various researchers, given the fact that stress can influence the well-being as well as the health of individuals. Researchers are not exceptions, as most are loaded with responsibilities that take time, effort and concentration to execute optimally. Moreover, the work load can compromise their productivity; affecting their abilities to obtain good results. The aim of this study is to identify stressors responsible for stress in research assistants. Most often, the stressors that are synonymous to this line of work include high working load, organizational constraints, relationship, environmental conditions, finance etc. This leads to anxiety, frustration and anger. This thesis considers these variables' impact on the productivity of research assistants in Eastern Mediterranean University. The results of the study showed that stress had a negative impact on the productivity of the researchers. This underlines that stress, if not carefully checked within an establishment, can have an adverse effect on the productivity of researchers.

Keywords: Productivity, Stress, Eustress, Distress, Research Assistants.

ÖZ

Bireylerin esenlikleri ve sađlıkları üzerinde önemli etkilere sahip olan stres, çeşitli araştırmacılar tarafından çalışılmış bir konudur. Stresin etkilerine maruz kalan kişiler arasında, verimlilikleri iş yüklerince etkilenen araştırmacılar da vardır. İş yükü kaynaklı stres verimliliklerini etkilediđi gibi iyi sonuçlar almalarını da engeller. Bu çalışmanın amacı araştırma görevlilerinin stres kaynaklarını araştırmaktır. Bu meslek grubunda çok rastlanan stres kaynakları arasında aşırı çalışma yükü, örgütsel kısıtlar, ilişkiler, çevresel koşullar ve mali koşullar gibi etmenler vardır. Bu stres kaynakları endişe, kaygı, gerilim, hayal kırıklığı, öfke gibi sonuçlara yol açar. Bu çalışma bu deđişkenlerin Dođu Akdeniz Üniversitesi'nde çalışan araştırma görevlileri üzerindeki etkisini araştırmaktadır. Çalışmanın sonuçlarına göre stresin araştırma görevlilerinin verimliliđi üzerinde olumsuz etkisi vardır. Stres kurum içerisinde dikkatli bir şekilde yönetilmezse araştırma görevlilerinin verimliliđini olumsuz etkileyecektir.

Anahtar Kelimeler: Verimlilik, Stres, Östres, Sıkıntı, Araştırma Görevlileri.

DEDICATION

This thesis is dedicated firstly to God almighty and to my beloved family. To my parents, Prof. Christian Odoniwei Opukri and Mrs Ebinimi Bukromo Opukri, both of them have loved and supported me throughout all my endeavors. To my son, Miedo, I hope this inspires you and teaches you that nothing is impossible. To my sister Bobara, you are always a source of inspiration and encouragement. Family is important and thank you all for going beyond and above for me. God bless you.

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Chapter 1

INTRODUCTION

1.1 Overview and Background

In higher education institutions, research on the identification and assessment of stressors particular to these institutions has been relatively scarce, especially when it comes to the impact of these stressors on students (Cahir & Morris, 1991). According to Greenberg et al. (1992) there are some types of pressure within the academic circle that help in enhancing the learning experience and productivity of the students. On the other hand, too much stress has a harmful effect on the productivity of the students and can impair their ability to concentrate while learning (Heins, Fahey & Leiden, 1984). In the education sector, students may be subjected to certain types of stress that are completely unique to them and these types of stress are not experienced by individuals outside the educational sector. Some of these stressors might be tests, writing a report, participating in the class, examination preparation etc.

Moreover, there is a drastic turn of events that take place when a student begins to assume responsibilities they were never subjected to. These responsibilities could be working on campus to earn some extra cash, working on capstone projects, meeting up with specific deadlines etc. Such events coupled with their academic lifestyle, have a detrimental effect on their productivity in the university. As a matter of fact, a university student needs to motivate him or herself to keep up with these barrage of

responsibilities such as working on campus, engaging in extracurricular activities etc., in order to stay focused, and be a successful student.

University students that have been in the institution for quite some time (e.g. graduate students) may have to carry out multiple roles and responsibilities such as working as a research assistant, having good grades, maintaining connection with family members, etc. These might be a huge burden to bear and might overload them. It is very difficult to balance these responsibilities as most often time is the limiting factor (Greenberg et al., 1996). The rate at which these personal adjustments in lifestyle are made is crucial in meeting both the external and internal demands which have an influence on the student's performance, productivity and health.

Responses to stress could be psychological as well as physiological and if chronic or frequently occurring, they could have harmful effect on the body resulting in illness or diseases (Greenberg et al., 1996). There is a phenomenon known as burnout that occurs when the energy reservoir of an individual has been depleted, and it usually manifests itself after an extended period of time (Essel and Owusu, 2017). According to Arnold, Robertson and Cooper (1993), there are three phases of stress: the alarm phase, the resistance phase and the exhaustion phase. These phases of stress usually replicate themselves depending on the intensity of stress the person is subjected to.

Graduate school is usually a vital phase of an individual's personal as well as professional development as a student and it is no surprise that there are several stressors that may have an adverse effect on the lifestyle of the student (Peterson, Cumming and Carpenter, 2003). One of the most important aspects of most graduate student's training process is working as a research assistant (i.e. carrying out teaching

and research responsibilities by assisting their professor). This usually prepares the researchers for higher responsibility in the educational sector, when they are employed fulltime. This training is important for the development of the researchers into becoming full-time professors as they pursue their masters or doctoral degrees. So, it comes as no surprise that this training process has stressors associated with it. Due to the few number of research into the stress associated with the education sector, number of studies on research assistant stressor is considerably low.

In line with what has been discussed, it is important that research assistant's stress is measured in the higher education institutions and its impact on the productivity of the research assistants is identified. Moreover, by measuring research assistant's stress within the researchers working environment, the stressors can be identified and proper management strategies can be put in place to curb the effect of research assistant's stress. And so, this thesis will focus on research assistant's stress impact on productivity as well as the managerial practices and implications.

1.2 Objectives of the Study

This thesis aims to identify the stressors that impact productivity and the levels that are acceptable as well as those that aren't acceptable amongst the research assistants.

More specifically, this paper aims to:

- a) To discuss stress in the higher education institutions
- b) To identify stressors of research assistants
- c) To evaluate the impact this stress has on the productivity of research assistants.

1.3 Significance of Study

Researchers' stress is undoubtedly a force that cannot be eradicated easily in higher education institutions. This is due to the environment, the subjected workload, the

schedules, timeframes etc. It is important that these stressors that are responsible for researchers' stress and the impact it has on the productivity of the researcher are identified. This research is important in adding to the body of knowledge on stress study in the education sector as research in this field is limited. Moreover, this study will be valuable in acquiring data from research assistants, in order to identify their stressors and how they impact their productivity.

1.4 Structure of the Thesis

The structure of this thesis is as follows: In chapter two, relevant studies on the subject matter will be discussed under the literature review. In chapter three, the research methodology will be provided and chapter four will cover the data acquired and the results. In chapter five, more information will be provided on the findings and the conclusion of the paper will be presented.

Chapter 2

REVIEW OF LITERATURE

2.1 Background and Overview

In many organizations in the world, job stress is a great concern. According to Lazarus (2003), the idea of stress is seen to be a universal and complicated, affecting everyone in different ways. Worker stress, therefore, has been a growing problem that does not just affect the workers' wellbeing or productivity but also their health (Public-Services, 2007).

Work stress can lead to fatigue which can cause complications such as a major impairment of other psychosomatic manifestations as well as damages that are physical in nature (Carven, 2007). There have been several studies that have drawn a correlation between worker's stress and the work loaded undertaken by the worker. The modern working environment is evolving and so, with the advancement of technology, workers are expected to adapt to this technological change by improving their speed and accuracy (Carven, 2007).

In higher education institutions, research assistants have the responsibility of carrying out the duties of a student and being a professional representative of the higher education institutions they serve. These research assistants are expected to maintain a minimum grade point average in their graduate program and respect the rules of the department they represent. Moreover, they are expected to be well grounded in the

courses they teach, as well as assist the professor in grading, lectures, research etc. Most research assistants work 10-20 hours weekly, with some teaching up to 6 courses within an academic semester, while trying to tackle their own academic program (Ferguson, Yonge and Myrick, 2004). And so, these researchers are exposed to stress as the workload, at times, affect their productivity. According to a survey conducted by the Kansas State University, “there was a 58% increase in stress related mental health issues, which was reported to the counsellors on campus between the year 1988 to 2001 (Hoover, 2003, p.25 –26). Furthermore, the idea of burnout is considered by some researchers to be the major basis for workers’ stress (Freudenberg, 1974). The author went on to say that the idea of burnout stems from situation at work, especially when the worker’s circle of operation is making contact with other people (Freudenberg, 1974).

On the other hand, there is positive stress known as eustress, which causes the worker to be more alert. This type of stress helps improve productivity and opens the envelop of creativity to manifest. However, there is a threshold because the longer the stress continues, the more harmful it becomes (Unimed, 2016).

According to Du Brin (1996), there is no job that exists without a likely stressor that induces the stress. Therefore, in the higher education institutions and working environment of the worker, there are stressors that affect the productivity of the researchers. In another research that was conducted, three phases of stress were identified i.e. the alarm phase, the resistance phase and the exhaustion phase (Arnold, Robertson and Cooper, 1995). The worker’s stress exists in these three phases and their level of impact correlates to the phase at which the worker’s stress is in.

In line with what has been discussed, it is important that worker's stress is measured in the higher education institutions, so as to find out its impact on the productivity of the research assistants. Moreover, by measuring worker's stress in the researchers' working environment, the stressors can be identified and proper management strategies can be put in place to curb the effect of workers' stress.

2.2 Definition of Stress

The term "Stress" became widely utilized as a biological term by Hans Selye, who was an endocrinologist, in the 1930s. As time went on, Selye later expanded as well as brought into popularity the idea of stress by connecting stress to inapt responses that were physiological in nature as a result of a given demand (Selye, 1950). In all, the stress itself became the condition while the stimulus that caused it in the first place became the stressor. This definition of stress covers a wider band of phenomenon stretching from radical dysfunction to minor irritation, resulting in ill-health.

Robins (2004) described stress as a dynamic phenomenon where an individual faces restriction, opportunities or demand which relates to what he/she requires, bringing about a result that is seen to be vital or non-concrete. Based on this definition it could be argued that stress is not completely negative but has a bright side to it, when the end, thereof, is profitable to the individual concerned. Furthermore, Moorhead and Griffen (1998) provided another definition of stress as an individual's adaptive reaction to an internal or external stimuli, bringing about a demand which is said to be psychological or physical on the individual. In addition, another researcher defined stress as an adverse emotional experience which is coupled with likely physiological, cognitive, biochemical and behavioural fluctuations, which is geared towards

redefining the outcomes of the events or accommodating the impacts that it produces (Taylor, 1995).

According to the World Health Organization's (WHO), occupational or work-related stress "is the response people may have when presented with work demands and pressures that are not matched to their knowledge and abilities and which challenge their ability to cope." (Stavroula L., Amanda G. and Tom C , 2004, p. 3).

The Health and Safety Executive (HSE) formal definition of work related stress is: "The adverse reaction people have to excessive pressures or other types of demand placed on them at work." (Great Britain: Health and Safety Executive, 2019, p. 3).

According to Steve (2011) stress is a reaction of an worker when certain demands, pressures and professional aspects have to be faced at the work place which do not match their knowledge levels thereby posing a challenge and threat to the capabilities of the worker which in turn would create a struggle for existence in terms of being employed in a place.

According to Jaffe, Smith and Segal, (2007) different professional contexts also create stress conditions to the workers at the work place. This happens when the worker feels that he or she is not being supported by their managers or colleagues, the knowledge required to complete a task is insufficient etc.

2.3 Different Types of Stress

Taylor (1995) stated that there four main types of stress, which are presented below:

2.3.1 Chronic Stress

According to Taylor (1995), this type of stress can be described as the persistent pressures as well as demands placed on an individual within an abstractly, unspecific and continuous time frame. This type of stress is responsible for wearing down the individual daily, weekly and perhaps yearly, with no impending sign of absence. This affects both the emotional balance of the person as well as the health of the individual leading to untimely death or breakdown.

2.3.2 Acute Stress

This is a very common type of stress as it preys on most individuals in the society. This is true because the victim of this type of stress is aware of it and knows exactly the origin of this stress. Examples of this type stress is an individual drowning in the pool, a car accident victim, a student called to the principal's office, campsite visitation by a ranging bear etc. However, this kind of stress can be scary but thrilling at the same time such as a roller coaster ride or parachute jump for a stunt. In these scenarios, the body gets back to normality after these happenings and life pretty much gets back to normal because the effect of this stress is temporal. On most occasions, acute stress doesn't result in long term damage to the body (Schneiderman, Ironson and Siegel, 2005; Taylor, 1995).

2.3.3 Traumatic Stress

This a serious kind of stress which emanates from an event that was dangerous or catastrophic, that had a huge impact on the individual's life. This usually lives a lasting impression on the individual's mind such as a sexual assault, natural disaster, participation in combat, life threatening accident, etc. In most cases, after the individual encounters the initial shock as well as the emotional attacks, the trauma kicks in and after a while the victim begins to recover. However, there are some that

cannot do away with the physical and psychological traumatization, it simply doesn't go away. In other words, the body never returns to normality and life itself doesn't continue as it did. This is commonly known as post-traumatic stress disorder. Example of these stress occurrences are consistent nightmares due to traumatic events, avoidance of places and things, hyperactive danger and irritability scouting etc (Schneiderman, Ironson and Siegel, 2005).

2.3.3 Episodic Acute Stress

Taylor (1995) described it as a stress which causes the victim to be aggressive and out of control. Moreover, the individual always seems to be facing multiple stressful situations. In other words, they are always in a hurry, always engaged in too many activities, too much demand is placed on them, they are always late etc. Those that are more susceptible to this type of stress have the A type personality. And most often, the individual who is susceptible to this type of stress may not be aware of it or agree to admit it. In general, his lifestyle might be tailored in such a way that stress becomes inevitable. In a nutshell, people who experience this type of stress find it difficult to change their lifestyle and this affects them in the long run (Schneiderman, Ironson and Siegel, 2005; Taylor,1995).

2.3 The Phases of Stress

There are three phases of stress i.e. the alarm phase, the resistance phase and the exhaustion phase. The order in which they come is the process at which stress comes about (Arnold, Robertson and Cooper, 1993).

The first phase is the alarm phase and in this phase, the body reacts to a foreign threat (stressor) in shock or alarm, when the stressor in question has been identified. As a result, adrenaline is released into the blood stream, increasing the anxiety of the victim

and creating what we now commonly refer to as the “fight or flight response”. Furthermore, an activation of the hypothalamic pituitary adrenal (HPA) axis takes place bringing about the production of cortisol (Arnold, Robertson and Cooper, 1993).

The second phase is called the resistance phase. Now the body that has been subjected to this stressor has to decide whether to fight or flight. The body will try as much as possible to equip itself with more resources in order to cope with the overwhelming stimuli; usually the body does this by adapting to the foreign threat and does its possible best to return the body to a state of equilibrium. If the body cannot adapt to this foreign threat, it will make its way to the third phase, which is the exhaustion phase.

Finally, in the exhaustion phase, the body’s resources have been used up and so, the body is incapable of maintaining normal bodily functions. Some of the clear signs of the initial nervous system symptoms are elevated heart rate, sweating, etc. Any further extension of these symptoms on the body will result in total immune system exhaustion and the functionality of the body will be compromised bringing about decomposition. These can further lead to complications such as depression, ulcers, diabetes, cardiovascular issues, mental illness etc. (Arnold, Robertson and Cooper, 1993).

2.4 Dynamics of Stress

There are five major dynamics of stress and this can be categorized as Anxiety, Burnout, Distress, Fear and Worry (Essel and Owusu, 2017).

- a) Anxiety: According to May (2015), anxiety is an individual’s response, acceptance and interpretation of stress. As a result, stress can be described as the journey which leads to anxiety and so, anxiety can be noted to be the effect

of stress. Anxiety is dependent on how an individual handles stress. In a nutshell, a good handler of stress will experience little or no anxiety at all. However, those who lack the ability to properly manage themselves as well as their time will be susceptible to stress and therefore, will exhibit anxiety.

b) Burnout: Burnout takes place whereby the person loses his very essence of motivation and drive and ceases his quest to continue carrying out a responsibility or activity. Burnout is driven by both internal and external factors. In addition, the skills and the talents possessed by the individual are very much there but the desire and will power to continue is completely dead. This is because such activities become a huge burden to bear and there is not any joy in it. Burnout is such a serious problem that it might destroy a person's motivation to study at school and pursue a career choice. Service providers such as counsellors, teachers as well as other officials are candidates for this stress dynamic. As a result, some may become irritated, rude as well as hostile to people they are meant to be serving. This also affects people whose jobs revolve around management practices such as team leaders, coaches etc. Also, people whose studies are time bound and who are meant to stick to a specific time frame are victims of burnout (Essel and Owusu, 2017). In a scenario where an activity requires a lot of details as well as explanation, burnout is most likely expected to occur. Some of the symptoms of burnout are listed / presented below:

- Conflict happenings
- Inadequate sleep due to worries
- Bored with activities or studies
- Looming frustration

- Immense effort put in study but achieving very little.
 - Drained by social activities
- c) Distress: This is a situation in which the victim suffers from acute physical, mental and severe pains. This occurrence is due to the inability to deal with certain challenges or issues. while performing certain roles or studies. This normally gives way to sadness, violence, drugs abuse, lowered concentration on academics and lowered social participation. In some cases, distress is triggered by external factors such as weather condition, relationship breakups etc.
- d) Fear: According to Layton (2006, p.1), “Fear is a chain reaction in the brain that starts with a stressful stimulus and ends with the release of chemicals that cause a racing heart, fast breathing and energise muscles”. Fear is a primordial emotion that has been embedded in our subconscious and it is as a result of human instinct, in response to perceived dangers. Fear aids in alerting the individual on these perceived dangers and protects from making certain disastrous decisions. Therefore, in some cases a little fear is a good thing, however, it can be a huge setback to an individual as it is very dangerous to the life of the individual. Fear itself can be intense, mild as well as short or long lasting. When danger is being perceived by an individual, the brain reacts by sending signals through the neural network which affects the nervous system (Layton, 2006). This replicates itself by causing abnormal behaviours i.e faster heartbeat, increased breathing, higher blood pressure, and sensation abnormalities in the extremities. Profuse sweating can also occur. This is commonly known as the flight or fight response, where the body must decide on what path to take to get out of the situation (Layton, 2006).

- e) Worry: Worry is normally brought about by an existing problem or challenge, or something yet to occur but is imminent. It is repetitive thinking as well as meditation on a challenge or fear. Worry normally looks at what is likely to occur in the future with respect to the current situation. Moreover, it is a disruption to the peace of mind the body is accustomed to. It gives rise to distress and results in higher blood pressure, stomach disturbances, as well as other physical ailment (Barlow and Craske, 2006).

2.5 Eustress and Distress Stressors

As discussed so far, stress is a reality that cannot be overlooked. There are stressors in life that are responsible for causing these emotional imbalances as well as psychological damages. Many people feel that they do not have enough resources to fight off these high level of stress that they experience occasionally. The circumstances responsible for triggering stress are known as stressors. According to Davidson (2001), stress can not only be classified as negative but positive as well. The positive stress is known as the Eustress, while the negative stress is known as Distress. In some circumstances, some positive situations give rise to stress such as a job promotion, getting married, having a child, etc. Eustress is caused by positive stressors and in most cases, they are not noticeable due to some characteristics. Some these characteristics are highlighted below:

- It feels exhilarating and exciting
- It changes the person's performance as well as attitude
- It is usually short term
- It helps in motivating the person

Distress, on the other hand, is caused by negative stressors and brings about negative feedback from the body and this type of stress is usually noticeable. For instance, getting fired from work, losing a loved one, illness, divorce etc. The characteristics of this stressors are highlighted below:

- It results in a troubled state of anxiety
- It is also short term but can have a lasting impact on the victim
- It doesn't feel good and is usually disturbing
- It affects the person's mind-set and productivity

2.6 Work-related Stress

In the definition proposed by the World Health Organization (WHO), "work-related stress is the response people may have when presented with work demands and pressures that are not matched to their knowledge and abilities and which challenge their ability to cope." (Stavroula L., Amanda G. and Tom C , 2004, p. 3).

According to Steve (2011), work related stress can be defined as the reaction of a worker when an external stimulus such as pressures, professional aspect and certain demands are put on an individual within a working environment, which doesn't correlate with the skill, knowledge or capability level. This brings about a challenge and threat to the worker's rational as well as make it uncomfortable for him to continue work smoothly within the working environment.

According to a research carried out by Jaffe, Smith and Segal (2007), various professional contexts bring about various stress conditions within the working environment. For instance, when the worker feels he/she is not being properly supported by his manager or supervisor, when he/she does not feel he/she is in control

of the assigned work or when he/she lacks the technical competence or skills to complete an objective or task that is assigned to him/her (Jaffe, Smith and Segal, 2007).

In summary, work related stress emanates within a working environment and is usually as a result of being subjected to certain stressors within the working environment. These stressors are responsible for affecting the individuals' performance and productivity within the workspace. And there are several sources of work related stress which will be discussed in the next section.

2.7 Causes and Sources of Work-related Stress

According to Arnold, Robertson and Cooper (1993), there are five major causes of work related stress: Factors inherent to the job, career development, role in the establishment, work relationship, and the climate and organizational structure.

2.7.1 Factors Inherent to the Job

In their research, Arnold, Robertson and Cooper (1993), explained certain inherent factors as:

- a) **Inadequate working environment:** This basically is about the environment that the worker is subjected to. This could be made up of fumes, high level of noise, heat, smells, poor ventilation systems, low to high lighting conditions, as well as all the external stimuli that a worker is subjected to. As a result, this can have an effect on the mental health of the worker and mood, i.e. compromising the senses. Moreover, the physical architecture of the working environment is still under this subheading, i.e. if the workspace is designed poorly limiting the workers in terms of inadequate communication network, these conditions can create poor working relationship.

- b) Working shifts:** In this case, the worker's working timeframe is segmented into shifts. Some of the workers tend to work during staggered or late hours, affecting their blood pressure as well temperature, blood sugar levels, metabolic rate, sleep patterns etc. giving rise to peptic ulcers, mild diabetes and hypertension. This raises the stress level of the worker, compromising his/her ability to perform task optimally.
- c) Stretched hours:** Working within a certain timeframe, knowing beforehand that this is your opening and closing time, gives opportunity to the workers to plan and structure their time. The long working hours required by many jobs appear to take a toll on workers' pre-planned schedule and affect their health, mental state as well as cause stress to occur. As a result, these workers such as medics, who are sleep deprived in some cases for 36 hours, may find out that both themselves and the work quality suffers.
- d) Imminent Dangers and Risks:** Any working environment that exhibits high level of dangers and risk to its workers will, without a doubt, raise the stress level of the workers. This happens when the worker thinks constantly of the dangers that are around him/ her and as a result, he/she is prepared to react to it immediately, resulting in respiration changes, tension within the muscle fibres, etc. which cause health challenges as a ripple effect.
- e) Modern Technology:** The impact of new technology in the working environment means that workers need to adapt continually to the changes that occur with the mannerism at which work is done, the system, and the new equipment. As a result, there is a huge pressure that emanates which leaves workers stressed out. Take for example, the use of new and improved machinery

to optimize the assembly line in a company might be burdensome to workers who are used to a particular system of operation.

- f) **Under loaded Work:** This has to do with certain types of work that the workers are already accustomed to and are no longer a challenge to them, as a result, certain types of work become boring, repetitive in nature, and unstimulating. This becomes a stressful situation for workers who find themselves in those circumstances.
- g) **Over loaded Work:** This takes place when the worker has been assigned a task or responsibility that is beyond his/her skill set or capability. Moreover, the imposition of deadlines creates a stressful situation for the worker.

2.7.2 Role in the Establishment

When there is a clear distinction on what the roles and responsibility of a worker is, the level of stress is minimized. However, this is not always the case in some working environment as some workers are at a loss as to what exactly their responsibilities are, and some of the roles change abruptly giving rise to increased level of stress. Arnold, Robertson and Cooper (1993), further emphasised on these roles and responsibilities to include the following:

- a) **The intricacy of the given role:** In this context, the workers are at a loss of what exactly they are expected to do within the workplace and also, how evaluation process of their work performance is carried out. Additionally, the workers are not sure exactly where they fit in the organization and they also unsure of the rewards, no matter how much effort they put into it. This lack of clarity of what roles the workers are meant to be executing brings about or provokes stress (John, 1996). Some people can be able to cope with it but for

others, it becomes a huge problem as they have a low tolerance for lack of direction.

b) Role conflict: In an organization where a worker is subjected to two or more superiors with conflicting demands, i.e. the obedience of one will mean the disobedience of the other, the worker's productivity and drive can suffer, bringing about increased stress, confusion and frustration. An example of this is when workers are torn between two groups which require two distinct execution styles of the same job specification. There are three different types of role conflicts that can be seen in some organizations (Luthans, 2002). In some cases, the conflict is between the worker and the assigned role. For example, a production worker is assigned a task by his superior to head the inspection of the final product, to see if it meets the requirements of the company and the customer. In working towards carrying out this responsibility, his core values do not permit him to be over controlling and blunt with the team, but this is what is expected from him by his superiors. In the second type of role conflict, which is called the intra role conflict, contradictory expectations are given to the worker for the same task or objective. And the last one is the inter role conflict, which requires differing expectations for one or more roles that is to be executed at the same time. For example, work related roles that are for the productivity of the establishment and non-work related roles that have nothing to do with the productivity of the company. According to Luthans (2002), some roles and responsibilities that are brought into the company are very important, however, the most important ones are the organizational roles and responsibilities. This covers roles such as digital marketing, sales person engineer, clerk team leader, managing director, system analyst etc. These

responsibilities often conflict with one and another, thereby affecting the performance of the working dynamics of the company.

- c) **Responsibility:** Within an establishment, there are two types of responsibilities. The responsibility for the people and the responsibility for the things such as the equipment, budget etc. Being responsible for people brings about a stressful situation as this normally requires spending a vast number of time with them, attending meetings, meeting up with their needs, conflict resolution, dispute settlement and carrying out interpersonal decisions that are not pleasant.

2.7.3 Work Relationship

Having to work with your subordinates, bosses and peers can take a toll in the way a worker feels. Individuals in high need for a relationship, work much better within a stable environment, where they get to know each other. It might seem that such a person might do well within an environment that has a large number of people but this might not be the case for certain individuals (Arnold, Robertson and Cooper, 1993). On the other side of the spectrum, an individual who has experienced poor working relationship with his superiors, subordinates and colleagues, can have increased stress level. This happens because the worker is based in the working environment for long hours, thereby developing or cultivating a poor working relationship. It very likely that they will avoid enforced intimacy with others, creating a close circle of friends thereby distancing themselves mentally and physically from others. As a matter of fact, there are some employers that do not appreciate workers bond and would like it to be more formal and strict, even to the extent of excluding family or relationship topics (Arnold, Robertson and Cooper, 1993).

2.7.4 Development of Career

More organizations have become flatter. This means that the responsibilities and the power inherent to this body radiates outwardly reaching every sector of the company. There is more diversity in terms of discipline and work ethics. Job and career options are becoming more intricate and scarcer. This means for a passionate young woman or man, hoping to build a career by rising up the rank, the challenge has been further taken to the next level. Optional skills are now becoming necessary skills to have. This brings a lot of stress to the workers as more workers are faced with the demand to upgrade their skillset. Workers are faced with the fear of job security, obsolescence, redundancy etc. Numerous job evaluations also bring about pressure and strains to the workers. Paradox also takes place as achieving that level of career excellence brings about more stress and pressure in handling the higher level responsibilities (Arnold, Robertson and Cooper, 1993).

2.7.5 Climate and Organizational Structure

When there is a lack of the sense of belonging in the establishment, the organization begins to suffer as there are inadequate opportunities that are presented to the workers. As a result, some are left with the notion that they are not really important and will feel downplayed and stressed. On the other hand, Betts (1993), argued that the cause of work stress can vary amongst individuals due to the various diverse background they come from. This means that the same level of stress that someone is subjected to may affect someone far differently than someone coming from another upbringing. There are two variations to this, i.e. the psychological and physical causes. From the physiological causes, this includes the workload, physical environment, humidity, temperature etc. Using a different point of view, Robbins (2004) pointed out the following as the various causes of stress:

- a) **Uncertainties arising in economy:** When there is economic instability or advancement, people become increasingly fearful of the security of their jobs. This normally brings about an increase in the stress level of the workers.
- b) **Technological uncertainties:** Rapid innovation in technology can result in a worker's skill becoming useless or obsolete. Robotics, cloud computing, automation, artificial intelligence is becoming huge threat to security of workers. And in the nearest future, some repetitive jobs might become obsolete and be replaced by robots. This brings about increased stress on the workers.
- c) **Organizational leadership:** This usually means the dynamics of the managerial organizational style of the senior executives. Most of these senior executives have a culture that is characterized by anxiety and fear. These senior executives embrace and enforce policies that are unrealistic, overbearing and inconsiderate, these executives want results within a short timeframe and occasionally fire workers who do not live up to their expectations.

2.8 Graduate Student Work-related Stress

Having a solid understanding on what exactly is the type of stress that an individual is subjected to is very vital in putting together an intervention that will help in curbing the impact that this stress has on the individual as well as the strain the individual will be put through. Although from what has been discussed so far, there are a lot of different categorization of stress, less is yet to be understood on stress pertaining to the occupational training such as the stress experienced by graduate student (Peterson, Cumming and Carpenter, 2003). And it should be noted that a high number of stressors may give rise to a negative impact to the life of the student. A review of literature had revealed that there have been convincing evidence which suggests that graduate students are often the victims of stress and depression (Goplerud, 1980; Stecker, 2004).

In some cases, this stressor can have dire consequence on the path of the Graduate Student. One of the fundamental training that a graduate student undergoes in order to become more responsible financially and develop a culture of research, is to being a research assistant. As a research assistant, responsibilities such as teaching, carrying out research, offering student mentoring and counselling etc., are integrated into the job description. Although this type of training is significant, it has the ability to increase the stress level of the research assistant. Most of the literature concentrates on stressors responsible for stress in graduate students (May, 2015), but very little research is conducted on research assistants. As a matter of fact, just one study examined the stressors responsible for the stress in research assistants. According to Duba (1991), the two types of stressors that can be identified is role ambiguity and role conflict, which are completely uncommon stress to the vast majority of the public. Therefore, the other stressors that might be in play might completely be unknown. With respect to the above mentioned framework for stress, the importance of this research is to find out the stressors as well as the strains that occur in research assistants by using quantitative survey based measures to obtain data. The quantitative survey based measures make it feasible for the participants to identify and write down the stresses that are considered stressful to research assistants.

2.9 Impact of Work-related Stress on Productivity

Productivity can be defined as the measure of outputs with respect to the labour hours spent (Chase and Aquilano, 1995). This, however, is not a guarantor that the company or organization in question will be able to make money off productivity. Take for example, the output of a company is 500 but only a 100 is sold. This will mean the remaining 400 will go into inventory. According to a definition given by Mathis and Jackson (2000), productivity can be defined as the measure of the quality as well as

quantity of the work that is done, taking into account the resource that was utilized in getting the work done. Steers (1995) stated that it is a useful strategy to the various forms of counterproductive behaviour, which are known for bringing about prolonged stress. In an argument brought out by some researchers, with respect to stress taking place in a working environment, there is a notion that stress is a result of a misfit between the person and the environment, where he or she works (Thompson and Mc Hugh ,1995). And so, it is the factors that arise either internally or externally that bring about extended stress, causing the adaptive potential of the individual to be activated, pushing him or her beyond their capabilities.

In addition, individuals handle stress differently. This is because personal factors are responsible for stress. For example, personality “K” will want to put all his efforts into achieving a particular goal and meet up with specific deadlines. As a result, “K” will put themselves in a position that will incur higher stress. This was confirmed by Browin and Havey (2001), who stated that it is extremely difficult for people to completely separate themselves from their personal lives and work and so, the ways which people use to handle stress differs with respective intricacies.

In other to show how stress impacts the productivity of a worker, Blumenthal and Bergstrom (2003) utilised a U-type curve for showing the effect stress has on the performance of a worker. During the duration of the experiment, as the stress level increased, the performance also increased. Furthermore, as the stress level was taken higher beyond the optimum level, performance will reach its highest peak and begin to decrease drastically. And so, from this experiment it shows that stress is actually important for enhancing the performance of the workforce but once it gets to a point

that results in discomfort, the productivity of the workforce is compromised as it now becomes harmful to them.

Garrison and Bly (1997) state that companies and enterprises have become aware of the challenges that is synonymous to stress subjectivity. As a matter of fact, they know that stress can debilitate a worker who is valuable overtime. And so, increasing the stress level results in absenteeism, high turnover, drop in productivity, etc. In other to increase the peak performance of a workplace, the stress within the working environment needs to be managed efficiently and effectively overtime. Moreover, Garrison and Bly (1997) attributed stress to two main factors i.e. overload and making deadlines.

- **Overload:** There are two categories of overload: unprepared for the particular work and excessive workload. The challenge of increasing the productivity of the workforce means that everyone will be able to accomplish more than what they were able to do. In a paper written by Anderson and Kyprianou (1994), there was a distinction made between having too much work i.e. quantitative and being qualitative i.e. being too difficult. Moreover, there are different strain that come about from the various symptoms relating to stress. This includes lower self-esteem, job tension, embarrassment, increased heart rate, job dissatisfaction etc.
- **Making Deadlines:** According to Garrison and Bly (1997), there is a sense of time pressure that is incited due to the productivity demands of getting the service or product completed. Customers usually demand quality and speed; therefore, as workers become more involved, they understand that they need priotize their time in other to make deadlines.

2.10 Hypothesis

In order to define the hypothesis for this study, there was need to draw evidence from existing literature. In an experiment carried out by Blumenthal and Bergstrom (2003), a U-type curve was used as the medium for showing the effect of stress on the performance of the worker. During the duration of the experiment, as the stress level increased, the performance also increased. Furthermore, as the stress level was taken higher beyond the optimum level, performance will reach its highest peak and begin to decrease drastically. And so, from this experiment it shows that stress is actually important for enhancing the performance of the workforce but once it gets to a point that results in discomfort, the productivity of the workforce is compromised as it now becomes harmful to them. Therefore, this study showed that there is a positive correlation between increasing the stress level and the performance of the workers. Moreover, the study also pointed out that there was a point where the stress level negatively impacted the workers due to an increase in workload. And so, we draw our first two hypotheses from this data.

H1: There is a strong positive correlation that exist between worker's stress and compromised productivity of research assistants.

H2: There is a strong positive correlation that exist between workload and compromised productivity of research assistants.

According to Garrison and Bly (1997), there is a sense of time pressure that is incited due to the productivity demands of getting the service or product completed. Customers usually demand quality and speed; therefore, as workers become more involved, they understand that they need prioritize their time in order to make deadlines.

Therefore, this leads to an increase in the productivity of the workers as the workers are aware of the importance of the task at hand and do their best to meet up with the targets. This gives rise to a type of positive stress known as the Eustress as discovered by Davidson (2001). Additionally, Garrison and Bly (1997) stated that companies and enterprises have become aware of the challenges that is synonymous to stress subjectivity. As a matter of fact, they know that stress can debilitate a worker who is valuable overtime. And so, increasing the stress level results in absenteeism, high turnover, drop in productivity, etc. In order to increase the peak performance of a workplace, the stress within the working environment needs to be managed efficiently and effectively overtime. As stated in section 2.3, Arnold, Robertson and Cooper (1993) discussed on three phases of stress. And from their research, the exhaustion phase occurs when the body's resources have been used up and so, the body is incapable of maintaining normal bodily functions. Some of the clear signs of the initial nervous system symptoms are elevated heart rate, sweating, etc. These can further lead to complications such as depression, ulcers, diabetes, cardiovascular issues, mental illness etc. This can significantly impact productivity of workers, who arrives at this phase of stress. And so, from these studies we draw our third hypothesis.

H3: The exhaustion phase has a high significant correlation on compromised productivity.

Chapter 3

METHODOLOGY

In this chapter, the Research Methodology is discussed. Research design, population size, sample size and the data collection technique will be presented.

3.1 Research Methodology

In this thesis, the quantitative research methodology was employed. The premise of this research consisted of an orderly and systematic collection of data from the research assistants (Jack, Scharalda, Jones-Jack, and Kirchain, 2010). In most of the previous literature, quantitative research has been regarded as the most efficient, reliable means of carrying out a research. Therefore, the results that emanates from carrying quantitative research can be used as a stepping stone for other future research to be carried out. This opens the door for numerous areas of research to be carried out (Cook and Cook, 2008). The survey was designed to access the impact of stress on research assistants. Because the research is being carried out on research assistants, it had to be altered to reflect certain variables that were unique to research assistant. The questionnaire used for data collection was adopted from a list of sources (Buckingham and Saunders, 2004; Cahir and Morris, 1991; Cohen, 1988; Essel and Owusu, 2017; Abhishek Shukla, Rajeev Srivastava, Tahir Nisar, 2016; Buckingham and Saunders, 2004; Kahn, Wolfe, Quinn, Snoek, & Rosenthal, 1964; Dizgah, et al., 2012). The questions that were chosen were done to reflects scales which measured working conditions, satisfaction level, stress concentration, comfortability levels, incentives for carrying out responsibilities, impact on grades as well as important variables at the

numerical level. The qualitative data was analysed via the use of an SPSS software. The research was carried out with a 100 research assistants from different faculties in Eastern Mediterranean University.

3.2 Research Design

In carrying out the research, a questionnaire based research was favoured and was administered to research assistants in Eastern Mediterranean University in Northern Cyprus. The major faculties were from Communication and Media Studies, Business and Economics, Engineering, Architecture, Pharmacy and Medicine and Tourism. The research assistants who were both part and full-time took part in this research, in order to cover all corners and find out how stress impacts their work. The questionnaire that was designed for the research covered information on demography (gender, age, nationality, etc.) in section A. In section B, the identification of the stress that positively or negatively impacts the productivity of the Research Assistants is evaluated, where variables like the work and family, comfortability level, working hours, job security, finances, language barrier, noise and distraction, etc. were included. Section C is about the level of stress based on the identified stress. Section D, measures the impact of stress on the productivity of Research Assistants. In all, there was a total of 28 questions to be answered. A template for the measuring scale was gotten from Abhishek Shukla, Rajeev Srivastava, Tahir Nisar. (2016) research; excessive work demand was measured by employing a scale developed by Buckingham and Saunders (2004). Furthermore, the work stress scale was developed by Kahn, Wolfe, Quinn, Snoek, & Rosenthal (1964) and Finally, the worker performance has been measured with a scale developed by Dizgah, et al. (2012).

3.3 Sample Size and Population

In Eastern Mediterranean University, there are a total of 14,000 students. Of which there are over 500 Research Assistants in all the respective faculties which forms the population size, while a total of 100 responses was obtained from the said figure, which represents the sample size. The sampling method that was employed is known as the purposive sampling method. This was utilized in order to test the impact of stress on the Research Assistants' productivity as well measure the level of stress that each Research Assistant is subjected to. I distributed the questionnaire to Research Assistants in eight faculties, the Research Assistants under study were either part-time or full time. Some were handling 7 courses, while others were handling 5 and others 3. The participants were only given the questionnaire if they were assisting their main Professors with the course work and tutorial. In all, I was able to get a total number of a 100 Research Assistants to participate in the Research.

3.4 Analysis of Data

In this research, the respondent's demographic characteristic was collected and then analysed with respect to the literature to reach a reasonable and substantial conclusion. The statistical analysis software that was employed for observing, plotting, graphing, analysing and creating tables of the acquired data is the IBM SPSS software and R Studio, which was used for the correlation analysis. Both software helped in reaching a conclusion on how stress impacts Research Assistant.

3.5 Research Procedure

The data collection took place in May 2018. The data collection took longer than expected because some of the Research Assistants were not free, moreover some of them had unpredictable schedules, which meant leaving before completing the survey. Some were reluctant to give away information as they wanted to see if the study was

legitimate. A total of 100 Research Assistants participated in the research in 6 major faculties. Although, the 6 faculties where the research were conducted made up a large percentage of the numbers of faculties in the school. According to the University website, it has barely over 10 faculties. However, efforts were also made to reach out to Research Assistants in the other faculties but due to time and accessibility constraint, it was quite impossible. Most of the Research Assistants that were met were either too busy or unresponsive to the questionnaires. The allotted time for filling in the survey was between 5-6mins, all questionnaires were checked after to see if the information written was complete. Some of the research assistants were met outside their departments as they were not available to fill it right there, so an appointment needed to be made in a different location.

Chapter 4

ANALYSIS AND FINDINGS

In this chapter, the analysis of the data and the results of the study will be presented.

This chapter covers information such as the demographics information of the research assistants, the descriptive statistics as well as the reliability statistics.

4.1 Demographic Characteristics of Research Assistants

Table 4.1: Nationality Distribution

	Demography	Percentage value	Accurate Percentage value	Cumulative Percentage value
Turkish	12	12	12	12
Iranian	21	21	21	33
Nigerian	44	44	44	77
Cypriot	11	11	11	88
Others	12	12	12	100
Sum Total	100	100	100	

From Table 4.1, the nationality distribution of the research assistants can be seen which is comprised of four major countries in EMU. With respect to the results stated, it can be seen from Table 1 that Turkish $n = 12$ signifying 12%, Iranians $n = 21$ signifying 21%, Nigerians $n = 44$ signifying 44%, Cypriots $n = 11$ signifying 11%, and Others $n = 12$ signifying 12%.

Table 4.2: Age Distribution

	Demography	Percentage value	Accurate Percentage value	Cumulative Percentage value
	16-19	3	3	3
	20-25	54	54	57
	26-30	34	34	91
	31-35	7	7	98
	35 and above	2	2	100
	Sum Total	100	100	

From Table 4.2, the age distribution of the research assistants can be seen of which falls into the following categories: (16-19) n = 3 signifying 3%, (20-25) n = 54 signifying 54%, (31-35) n = 10 signifying 7%, and (35 and above) n = 2 signifying 2%.

Table 4.3: Gender Distribution

	Demography	Percentage value	Accurate Percentage value	Cumulative Percentage value
	Male	60	60	60
	Female	40	40	100
	Sum Total	100	100	

From Table 4.3, the gender distribution of the research assistants can be seen of which falls into the following categories: (Male) n = 60 signifying 60% and (Female) n = 40 signifying 40%.

Table 4.4: Marital Status

	Demography	Percentage value	Accurate Percentage value	Cumulative Percentage value
Single	80	80	80	80
Married	13	13	13	93
Divorced	1	1	1	94
I don't want to mention	5	5	5	99
Others	1	1	1	100
Sum Total	100	100	100	

From Table 4.4, the marital status of the research assistants can be seen: where (Single) n = 80 signifying 80%, (Married) n = 13 signifying 13%, (I don't want to mention) n = 5 signifying 5%, and (Others) n = 1 signifying 1%.

Table 4.5: Residency Distribution

	Demography	Percentage value	Accurate Percentage value	Cumulative Percent
Lefkosa	14	14	14	14
Magusa	80	80	80	94
Girne	5	5	5	99
Others	1	1	1	100
Sum Total	100	100	100	

From Table 4.5, the residency distribution of the research assistants can be broken down into three major cities and from the result of the analysis, those residing in Lefkosia were n = 14 signifying 14%, those residing in Girne were n = 5 signifying 5%, and Others n = 1 signifying 1%.

Table 4.6: Faculty Information

	Demography	Percentage value	Accurate Percentage value	Cumulative Percentage value
Communication and Media Studies	23	23	23	23
Business & Economics	34	34	34	57
Engineering	19	19	19	76
Architecture	3	3	3	79
Arts & Sciences	6	6	6	85
Tourism	10	10	10	95
Others	5	5	5	100
Sum Total	100	100	100	

In Table 4.6, The results of the faculty distribution for the Research Assistants are stated above, the findings show that the Communication and Media Studies has $n = 23$ representing 23%, Business and Economics has $n = 34$ representing 34%, Engineering has $n = 19$ representing 19%, Architecture has $n = 3$ representing 3%, Art and Sciences has $n=6$ representing 6%, Tourism has $n=10\%$, and Others $n=5$ representing 5%.

Table 4.7: Program Type

	Frequency	Percentage value	Accurate Percentage value	Cumulative Percentage value
Masters	69	69	69	69
PhD	31	31	31	100
Sum Total	100	100	100	

From Table 4.7, the program type of the research assistants is presented: where (Masters) $n =69$ signifying 69% and (PhD) $n = 31$ signifying 31%.

Table 4.8: Stress and its Frequency of Occurrence

Questions	Measures	N	P(%)
Have you ever felt stress during your work?	Yes	81	81
	No	19	19
How often do you feel stressed	Always Usually	38	38
	Sometimes	45	45
	Rarely	14	14
	Never	2	2
	Do not know	1	1

From Table 4.8, Research Assistant were asked about whether or not they experienced stress at work and from the results: 81 researchers said “Yes” signifying 81% and 19 researchers said “No” signifying 19%. Moreover, from the table the research assistants were asked how often do they feel stressed at work. From the results, (Always usually) n = 38 signifying 38%, (Sometimes) n = 45 signifying 45%, (Never) n = 2 signifying 2%, and (Do not Know) n =1 signifying 1%.

Table 4.9: How many hours in a week do you work as a research assistant?

	Frequency	Percentage value	Accurate Percentage value	Cumulative Percentage value
10hrs	38	38	38	38
20hrs	20	20	20	58
30hrs	13	13	13	71
40hrs	28	28	28	99
50hrs or more	1	1	1	100
Sum Total	100	100	100	

From Table 4.9, the research assistants were asked how many hours in a week do they work. From the results, some researchers specified (10hrs) $n = 38$ signifying 38%, (20hrs) $n = 20$ signifying 20%, (30hrs) $n = 13$ signifying 13%, (40hrs) $n = 28$ signifying 28% and (50hrs and above) $n = 1$ signifying 1%.

Table 4.10: How many courses do you teach?

	Frequency	Percentage value	Accurate Percentage value	Cumulative Percentage value
1-2	63	63	63	63
3-4	23	23	23	86
5-6	11	11	11	97
6-7	3	3	3	100
Sum Total	100	100	100	

From Table 4.10, the research assistants were asked how many courses do they teach in EMU. From the results, some researchers specified (1-2) $n = 63$ signifying 63%, (3-4) $n = 23$ signifying 23%, (5-6) $n = 11$ signifying 11%, and (6-7) $n = 3$ signifying 3%.

Table 4.11: Have you ever thought of giving up your job as a researcher because of the stress?

	Frequency	Percentage value	Accurate Percentage value	Cumulative Percentage value
Yes	57	57.0	57.0	57.0
No	43	43.0	43.0	100.0
Sum Total	100	100.0	100.0	

From Table 4.11, Research Assistant were asked about whether or not they ever thought of quitting their jobs due to the stress and from the results: 57 researchers said “Yes” signifying 57% and 43 researchers said “No” signifying 43%.

4.2 The Descriptive Statistical Analysis of the 5 Point Likert Scale Items

In this section, the descriptive statistics of the 5-point Likert scale is presented and analysed. The items presented in the questionnaire measure the impact of stress on the productivity of research assistants.

4.2.1 Determination of worker’s stress level

Table 4.12: Workers Stress Level

	To a very large extent		To a large extent		To a fairly large extent		To a little extent		To a very little extent		Mean (\bar{x})
	N	P (%)	N	P (%)	N	P (%)	N	P (%)	N	P (%)	
Pressures from work Colleagues, Students,	24	24	14	14	21	21	18	18	23	23	3.0200
Inadequate support at work	14	14	18	18	27	27	23	23	18	18	3.1300
High unpredictability of job pattern	13	13	21	21	21	21	17	17	28	28	3.2600
Work & Family life	10	10	18	18	29	29	19	19	24	24	3.2900

Long Working hours	16	16	16	16	28	28	24	24	16	16	3.0800
High Working load	19	19	25	25	20	20	18	18	18	18	2.9100
Inadequate monetary reward or insufficient salary	17	17	13	13	31	31	24	24	15	15	3.0700
Noise and distractions.	30	30	20	20	23	23	14	14	13	13	2.6000
Comfort level at the office	12	12	21	21	33	33	19	19	15	15	3.0400
Safety (Unsafe working environment, exposure to harsh conditions)	9	9	18	18	22	22	30	30	21	21	3.3600
Job security	8	8	17	17	29	29	22	22	24	24	3.3700
Coping with personal study and teaching responsibilities	18	18	19	19	24	24	26	26	13	13	2.9700
Lack of proper tools for the job	7	7	24	24	28	28	23	23	18	18	3.2100
Lack of control and decision making opportunities on matters that concern you	11	11	18	18	28	28	27	27	16	16	3.1900
Lower grade	17	17	22	22	19	19	20	20	22	22	3.0800
Language difficulties	31	31	20	20	15	15	19	19	15	15	2.6700
Financial Difficulties	20	20	20	20	26	26	8	8	26	26	3.0000

From Table 4.12, The descriptive statistics of research assistant's response to the statement "Pressures from work (Colleagues, Students, Instructor etc.)". Findings from the research show that those who said to a very large extent are n = 24 representing 24%. Those who said to a large extent are n = 14 representing 14%. Those who said to a fairly large extent are n = 21 representing 21%. Those who said to a little extent are n = 18 representing 18%. And those who said to a very little extent n = 23 representing 23%. Finally, the mean was calculated to be 3.02.

Under the research assistant's response to the statement "Inadequate support at work". Findings from the research show that those who said to a very large extent are n = 14

representing 14%. Those who said to a large extent are $n = 18$ representing 18%. Those who said to a fairly large extent are $n = 27$ representing 27%. Those who said to a little extent are $n = 23$ representing 23%. And Those who said to a very little extent $n = 18$ representing 18%. Finally, the mean was calculated to be 3.13.

Under the research assistant's response to the statement "High Unpredictability of Job Pattern". Findings from the research show that those who said to a very large extent are $n = 13$ representing 13%. Those who said to a large extent are $n = 21$ representing 21%. Those who said to a fairly large extent are $n = 21$ representing 21%. Those who said to a little extent are $n = 17$ representing 17%. And Those who said to a very little extent $n = 28$ representing 28%. Finally, the mean was calculated to be 3.26.

Under the research assistant's response to the statement "Work & Family life". Findings from the research show that those who said to a very large extent are $n = 10$ representing 10%. Those who said to a large extent are $n = 18$ representing 18%. Those who said to a fairly large extent are $n = 29$ representing 29%. Those who said to a little extent are $n = 19$ representing 19%. And Those who said to a very little extent $n = 24$ representing 24%. Finally, the mean was calculated to be 3.29.

Under the research assistant's response to the statement "Long Working Hours". Findings from the research show that those who said to a very large extent are $n = 16$ representing 16%. Those who said to a large extent are $n = 16$ representing 16%. Those who said to a fairly large extent are $n = 28$ representing 28%. Those who said to a little extent are $n = 24$ representing 24%. And Those who said to a very little extent $n = 16$ representing 16%. Finally, the mean was calculated to be 3.08.

Under the assistant's response to the statement "High Working Load". Findings from the research show that those who said to a very large extent are $n = 19$ representing 19%. Those who said to a large extent are $n = 25$ representing 25 %. Those who said to a fairly large extent are $n = 20$ representing 20%. Those who said to a little extent are $n = 18$ representing 18%. And Those who said to a very little extent $n = 18$ representing 18%. Finally, the mean was calculated to be 2.91.

Under the research assistant's response to the statement "Inadequate monetary reward or insufficient salary". Findings from the research show that those who said to a very large extent are $n = 17$ representing 17%. Those who said to a large extent are $n = 13$ representing 13 %. Those who said to a fairly large extent are $n = 31$ representing 31%. Those who said to a little extent are $n = 24$ representing 24%. And Those who said to a very little extent $n = 15$ representing 15%. Finally, the mean was calculated to be 3.02.

Under the research assistant's response to the statement "Noise and distractions". Findings from the research show that those who said to a very large extent are $n = 30$ representing 30%. Those who said to a large extent are $n = 20$ representing 20 %. Those who said to a fairly large extent are $n = 23$ representing 23%. Those who said to a little extent are $n = 14$ representing 14%. And Those who said to a very little extent $n = 13$ representing 13%. Finally, the mean was calculated to be 2.6.

Under the research assistant's response to the statement "Comfort level at the office". Findings from the research show that those who said to a very large extent are $n = 12$ representing 12%. Those who said to a large extent are $n = 21$ representing 21 %. Those who said to a fairly large extent are $n = 33$ representing 33%. Those who said

to a little extent are $n = 19$ representing 19%. And Those who said to a very little extent $n = 15$ representing 15%. Finally, the mean was calculated to be 3.04.

Under the research assistant's response to the statement "Safety (Unsafe working environment, exposure to harsh conditions)". Findings from the research show that those who said to a very large extent are $n = 9$ representing 9%. Those who said to a large extent are $n = 18$ representing 18 %. Those who said to a fairly large extent are $n = 22$ representing 22%. Those who said to a little extent are $n = 30$ representing 30%. And Those who said to a very little extent $n = 21$ representing 21%. Finally, the mean was calculated to be 3.36.

Under the research assistant's response to the statement "Job security". Findings from the research show that those who said to a very large extent are $n = 8$ representing 8%. Those who said to a large extent are $n = 17$ representing 17 %. Those who said to a fairly large extent are $n = 29$ representing 29%. Those who said to a little extent are $n = 22$ representing 22%. And Those who said to a very little extent $n = 24$ representing 24%. Finally, the mean was calculated to be 3.37.

From the analysis of the response provided for "Coping with personal study and teaching responsibilities" in the descriptive statistics. Results show that those who said to a very large extent are $n = 18$ representing 18%. Those who said to a large extent are $n = 19$ representing 19 %. Those who said to a fairly large extent are $n = 24$ representing 24%. Those who said to a little extent are $n = 26$ representing 26%. And Those who said to a very little extent $n = 13$ representing 13%. Finally, the mean was calculated to be 2.97.

Under the response provided for “Lack of proper tools for the Job” in the descriptive statistics. Results show that those who said to a very large extent are $n = 7$ representing 7%. Those who said to a large extent are $n = 24$ representing 24 %. Those who said to a fairly large extent are $n = 28$ representing 28%. Those who said to a little extent are $n = 23$ representing 23%. And Those who said to a very little extent $n = 18$ representing 18%. Finally, the mean was calculated to be 3.21.

Under the research assistant’s response to the statement “Lack of control and decision making opportunities on matters that concern you”. Findings from the research show that those who said to a very large extent are $n = 11$ representing 11%. Those who said to a large extent are $n = 18$ representing 18 %. Those who said to a fairly large extent are $n = 28$ representing 28%. Those who said to a little extent are $n = 27$ representing 27%. And Those who said to a very little extent $n = 16$ representing 16%. Finally, the mean was calculated to be 3.19.

From the analysis of the response provided for “Lower grades” in the descriptive statistics. Results show that those who said to a very large extent are $n = 17$ representing 17%. Those who said to a large extent are $n = 22$ representing 22 %. Those who said to a fairly large extent are $n = 19$ representing 19%. Those who said to a little extent are $n = 20$ representing 20%. And Those who said to a very little extent $n = 22$ representing 22%. Finally, the mean was calculated to be 3.08.

Under the response provided for “Lower grades” in the descriptive statistics. Results show that those who said to a very large extent are $n = 31$ representing 31%. Those who said to a large extent are $n = 20$ representing 20 %. Those who said to a fairly large extent are $n = 15$ representing 15%. Those who said to a little extent are $n = 19$

representing 19%. And Those who said to a very little extent n = 15 representing 15%. Finally, the mean was calculated to be 2.67.

Finally, the descriptive statistics of research assistant’s response to the statement “Financial Difficulties”. Findings from the research show that those who said to a very large extent are n = 20 representing 20%. Those who said to a large extent are n = 20 representing 20%. Those who said to a fairly large extent are n = 26 representing 26%. Those who said to a little extent are n = 8 representing 8%. And Those who said to a very little extent n = 26 representing 26%. Finally, the mean was calculated to be 3.

4.2.2 Worker’s Stress Impact on Productivity of the Research Assistants

Table 4.13: Impact of Worker’s Stress on the Productivity of Research Assistants

	Strongly agree		Agree		Undecided		Disagree		Strongly disagree		Mean
	N	P (%)	N	P (%)	N	P (%)	N	P (%)	N	P (%)	
I feel more stressed when I am sweating, my heart rate is elevated, and I am disorientated	38	38	13	13	20	20	3	3	26	26	2.6600
I am more stressed when I am being asked to do more that my ability permits	33	33	27	27	16	16	11	11	13	13	2.4400
My overall job performance is compromised when I am stressed	17	17	30	30	26	26	12	12	15	15	2.7800
Stress at work affects my relationship at home and with peers	12	12	32	32	29	29	13	13	14	14	2.8500
Stress at work affects my commitment and passion	8	8	16	16	38	38	25	25	12	12	4.1300
Stress at work affects my grade and teaching dynamics	7	7	18	18	22	22	34	34	19	19	3.4000
Stress at work causes me to come late to the office, class etc	8	8	10	10	30	30	30	30	22	22	3.4800
My level of concentration drops when I am stressed	13	13	31	31	22	22	19	19	15	15	2.9200
Stress at work pushes me to be more quicker	12	12	19	19	23	23	27	27	19	19	3.2200

and efficient in performing my task as far as it doesn't exceed the threshold of what i can handle											
Pressure at work has affected my health whilst working in this Institution	13	13	28	28	27	27	14	14	18	18	2.9600
Stress at work improves my problem solving skills by making me think more	8	8	24	24	36	36	16	16	16	16	3.0800
Stress at work has been helpful in improving my managerial skills and dexterity	10	10	26	26	28	28	21	21	15	15	3.0500
I smoke more often or take more breaks when I am stressed at work	15	15	13	13	22	22	28	28	22	22	3.2900

From Table 4.13, From the analysis of the response provided for “I feel more stressed when I am sweating, my heart rate is elevated, and I am disorientated” in the descriptive statistics. Results show that those who said they strongly agree are n = 38 representing 38%. Those who said they agree are n = 13 representing 13 %. Those who are undecided are n = 20 representing 20%. Those who said they disagree are n = 3 representing 3%. And Those who said strongly disagree are n = 26 representing 26%. And so, from careful observation 51% agree and 29% disagree with the given statement. Finally, the mean was calculated to be 2.66.

From the analysis of the response provided for “I am more stressed when I am being asked to do more than my ability permits” in the descriptive statistics. Results show that those who said they strongly agree are n = 33 representing 33%. Those who said they agree are n = 27 representing 27 %. Those who are undecided are n = 16 representing 16%. Those who said they disagree are n = 11 representing 11%. And Those who said strongly disagree are n = 13 representing 13%. And so, from careful

observation 60% agree and 24% disagree with the given statement. Finally, the mean was calculated to be 2.44.

From the analysis of the response provided for “My overall job performance is compromised when I am stressed” in the descriptive statistics. Results show that those who said they strongly agree are n = 17 representing 17%. Those who said they agree are n = 30 representing 30%. Those who are undecided are n = 26 representing 26%. Those who said they disagree are n = 12 representing 12%. And Those who said strongly disagree are n = 15 representing 15%. And so, from careful observation 47% agree and 27% disagree with the given statement. Finally, the mean was calculated to be 2.78.

Under the response provided for “Stress at work affects my relationship at home and with peers” in the descriptive statistics. Results show that those who said they strongly agree are n = 12 representing 12%. Those who said they agree are n = 32 representing 32%. Those who are undecided are n = 29 representing 29%. Those who said they disagree are n = 13 representing 13%. And Those who said strongly disagree are n = 14 representing 14%. And so, from careful observation 44% agree and 27% disagree with the given statement. Finally, the mean was calculated to be 2.85.

From the analysis of the response provided for “Stress at work affects my commitment and passion” in the descriptive statistics. Results show that those who said they strongly agree are n = 8 representing 8%. Those who said they agree are n = 16 representing 16%. Those who are undecided are n = 38 representing 38%. Those who said they disagree are n = 25 representing 25%. And Those who said strongly disagree

are $n = 13$ representing 13%. And so, from careful observation 24% agree and 38% disagree with the given statement. Finally, the mean was calculated to be 4.13.

From the analysis of the response provided for “Stress at work affects my grade and teaching dynamics” in the descriptive statistics. Results show those who said they strongly agree are $n = 7$ representing 7%. Those who said they agree are $n = 18$ representing 18%. Those who are undecided are $n = 22$ representing 22%. Those who said they disagree are $n = 34$ representing 34%. And Those who said strongly disagree are $n = 19$ representing 19%. And so, from careful observation 25% agree and 53% disagree with the given statement. Finally, the mean was calculated to be 3.4.

Under the response provided for “Stress at work causes me to come late to the office, class etc” in the descriptive statistics. Those who said they strongly agree are $n = 8$ representing 8%. Those who said they agree are $n = 10$ representing 10%. Those who are undecided are $n = 30$ representing 30%. Those who said they disagree are $n = 30$ representing 30%. And Those who said strongly disagree are $n = 22$ representing 22%. And so, from careful observation 18% agree and 52% disagree with the given statement. Finally, the mean was calculated to be 3.48.

Under the response provided for “My level of concentration drops when I am stressed” in the descriptive statistics. Results show that those who said they strongly agree are $n = 13$ representing 13%. Those who said they agree are $n = 31$ representing 31%. Those who are undecided are $n = 22$ representing 22%. Those who said they disagree are $n = 19$ representing 19%. And Those who said strongly disagree are $n = 15$ representing 15%. And so, from careful observation 44% agree and 34% disagree with the given statement. Finally, the mean was calculated to be 2.92.

From the analysis of the response provided for “My level of concentration drops when I am stressed” in the descriptive statistics. Results show those who said they strongly agree are n = 12 representing 12%. Those who said they agree are n = 19 representing 19%. Those who are undecided are n = 23 representing 23%. Those who said they disagree are n = 27 representing 27%. And Those who said strongly disagree are n = 19 representing 19%. And so, from careful observation 31% agree and 46% disagree with the given statement. Finally, the mean was calculated to be 3.22.

Under the response provided for “Pressure at work has affected my health whilst working in this Institution” in the descriptive statistics. Results show those who said they strongly agree are n = 13 representing 13%. Those who said they agree are n = 28 representing 28%. Those who are undecided are n = 27 representing 27%. Those who said they disagree are n = 14 representing 14%. Those who said they strongly disagree are n = 18 representing 18%. And so, from careful observation 41% agree and 32% disagree with the given statement. Finally, the mean was calculated to be 2.96.

From the analysis of the response provided for “Pressure at work has affected my health whilst working in this Institution” in the descriptive statistics. Results show those who said they strongly agree are n = 13 representing 13%. Those who said they agree are n = 28 representing 28%. Those who are undecided are n = 27 representing 27%. Those who said they disagree are n = 14 representing 14%. And Those who said they strongly disagree are n = 18 representing 18%. And so, from careful observation 41% agree and 32% disagree with the given statement. Finally, the mean was calculated to be 3.08.

Under the response provided for “Pressure at work has affected my health whilst working in this Institution” in the descriptive statistics. Results show those who said they strongly agree are $n = 10$ representing 10%. Those who said they agree are $n = 26$ representing 26%. Those who are undecided are $n = 28$ representing 28%. Those who said they disagree are $n = 21$ representing 21%. And Those who said they strongly disagree are $n = 15$ representing 15%. And so, from careful observation 36% agree and 36% disagree with the given statement. Finally, the mean was calculated to be 3.05.

From the analysis of the response provided for “Pressure at work has affected my health whilst working in this Institution” in the descriptive statistics. Results show those who said they strongly agree are $n = 15$ representing 15%. Those who said they agree are $n = 13$ representing 13%. Those who are undecided are $n = 22$ representing 22%. Those who said they disagree are $n = 28$ representing 28%. And Those who said they strongly disagree are $n = 22$ representing 22%. And so, from careful observation 36% agree and 36% disagree with the given statement. Finally, the mean was calculated to be 3.29.

4.3 Pearson Correlation

Pearson correlation is a statistical analytical measure of the linear relationship that exist between two variables taking into account the strength i.e. given by the coefficient r that ranges from -1 to +1 and, the existence which is denoted by p-value. And so, if there exist a correlation amongst the chosen variable we can say that a correlation exists. In the words of Cohen (1988), an r value of 0.1 is said to be minimum, a value of 0.3 is said to be medium and finally a value of 0.5 is said to be large.

4.3.1 Pearson Correlation Matrix

Table 4.14: Pearson Correlation Matrix of Stress, Compromised Productivity, Workload and Exhaustion

	Stress	Compromised Productivity	Workload	Exhaustion
Stress	1			
Compromised Productivity	.226*	1		
Workload	.287**	.122	1	
Exhaustion	.284**	.403**	.177	1
*. Correlation is significant at the 0.05 level (2-tailed).				
**. Correlation is significant at the 0.01 level (2-tailed).				

In Table 4.14, the Pearson correlation matrix is shown to have a significant positive correlation between compromised productivity and stress at an r value of 0.226 at the 0.01 level. Following this, there is a significant positive correlation between stress and workload at an r value of 0.287 at the 0.05 level. Workload has a positive correlation with compromised productivity at an r value of 0.122. Furthermore, exhaustion has a significant positive correlation with stress at the r value of 0.284 at the 0.05 level of significance. Also, exhaustion has a significant positive correlation with compromised productivity at the r value of 0.403 at the 0.05 level of significance. Finally, there is a positive correlation between exhaustion and workload at an r value of 0.177.

4.4 Reliability Test

The lead is taken by reliability especially when the chosen variables is gotten from the summated scales which are used for the forecaster mechanisms within the objective model. And so, it is vitally important and crucial that the same sets of findings will be responsible for the production of the same response, given the scenario that the same questions were given by the same respondents. Therefore, the Cronbach Alpha (1952),

is used as an indicator for evaluating consistency with reliability as an estimate. Additionally, it is usually used for the estimation of the internal reliability consistency of the given set of data. Its coefficient ranges from the value .00 to 1.0. When a value of .00 is gotten, it means that the consistency in the measurement doesn't exist. However, a value of 1.0 means there exist a consistency which is completely perfect. In the table below, the reliability test is presented.

Table 4.15: Reliability Test

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	No. of Items
.667	.829	43

In Table 4.14, we can see that the reliability test was carried out and the findings from the study shows that the measurement has a consistency that is internal of 66.7% and the remaining 33% was as a result of error due to variance measurement.

Chapter 5

DISCUSSION AND CONCLUSION

5.1 Discussion

In other for the impact of stress on the compromised productivity of the research assistants to be discussed, there is need to tie in the results from the analysis and relate it to our initial hypothesis in other to arrive at a conclusion.

5.1.1 Hypothesis 1

Hypothesis 1 states that there is a strong positive correlation that exist between researcher's stress and compromised productivity of research assistants. From the Pearson correlation test that was carried out there is a significant positive correlation between compromised productivity and stress at an r value of 0.226 at the 0.01 level. According to Cohen (1988), this is a minimum positive correlation. Therefore, we reject our hypothesis that there exist a strong positive correlation with compromised productivity as this isn't the case. It does however have a minimum positive correlation. A similar result was found in the experiment carried out by Blumenthal and Bergstrom (2003), where a U-type curve was used as the medium for showing the effect of stress on the performance of the worker. From the experiment, it showed that stress is actually important for enhancing the performance of the workforce but once it gets to a point that results in discomfort, the productivity of the workforce is compromised as it now becomes harmful to them. Therefore, this study showed that there is a positive correlation between increasing the stress level and the performance of the workers.

5.1.2 Hypothesis 2

Hypothesis 2 states that there is a strong positive correlation that exist between the workload and the compromised productivity of research assistants. According to our result, Workload has a positive correlation with compromised productivity at an r value of 0.122. According to Cohen (1988), this is a minimum positive correlation. However, the relationship is not significant. Therefore, we reject our hypothesis as this doesn't have a strong positive correlation. This result is consistent with the findings from Omolayo and Omole (2013). In their research, the impact of mental workload on the job performance of two classes of individuals i.e. the non-academic and academic staff was studied. From the sample size of a 100 workers, a Perceived Work Performance Scale (PWPS) and Multiple Resource Questionnaire, were used for data collection. The result showed that there is no significant relationship between the job performance and the mental workload of both the non-academic and academic staff. Moreover, the results were independent of whether or not they were females or males.

5.1.3 Hypothesis 3

Hypothesis 3 states that the exhaustion phase has a high significant correlation with compromised productivity. From the results, the exhaustion phase has a significant positive correlation with compromised productivity at the r value of 0.403 at the 0.05 level of significance and so, we agree with the hypothesis as the exhaustion phase has an almost large r value according to Cohen (1988). The result was consistent with the study carried out by Atalayin et al. (2015). In their research, an investigation was carried out on the prevalence of burnout amongst the group of Turkish preclinical dental students in order to make a comparison between the burnout level of students subjected to immense academic stress. The findings suggest that academic workload was an important factor constituting to the development of burnouts. And so, students

having burnouts opted to change their major or planned to discontinue their postgraduate education. Moreover, students having high level of burnout reported lower academic achievement and satisfaction. This meant that burnout constituted to high level of unproductivity amongst students.

5.2 Conclusion

This study was carried out in Spring 2019. The researchers that participated in the study were from EMU. Moreover, the researchers were from different ethnicity as well as cultural upbringing, in order to expand the reach of the collected or accumulated data as well as increase the accuracy our findings. The major aim of the research was to ascertain the impact of stress on the compromised productivity of research assistant. Descriptive statistics was used to evaluate the stress variables as well as the use of the Pearson correlation to understand the correlation between the variables. From the results, it was seen that two of our hypothesis was rejected and the remaining one was accepted. From the conducted research, it was seen that stress related to research assistants manifest itself in a couple of ways. And so, from the Pearson correlation matrix, a significant positive correlation between compromised productivity and stress at an r value of 0.226 at the 0.01 level was observed. Following this, workload had a positive correlation with compromised productivity at an r value of 0.122. Finally, exhaustion had a significant positive correlation with compromised productivity at the r value of 0.403 at the 0.05 level of significance. Therefore, researcher's stress negatively impacts productivity and the level of concentration of the researcher. As seen with respect to the exhaustion phase, the higher the stress factor the individual is subjected to, the higher the increased compromise of productivity. In all, it was shown that stress has a negative impact on the productivity of the researchers.

5.2.1 Implication of this Study

The strength of this research is that an investigation was carried out on research assistants to uncover the stress to impede productivity and so, this area of research is rarely done. Moreover, identification of the stressors that affect graduate students are sparsely done. Although most of the participants was from the business and economics faculty, 66% of the participants were from other faculty, which extended the generality of the findings. As a matter of fact, the various disciplines and program types made the sample pool of 100 researchers, a broader representative of the research assistant population, which is very rare in this area of research. In all, this thesis utilized a quantitative research method with a closed ended questionnaire that helps investigate the stressful levels across the sample size. This thesis is also unique because it employed the use of two statistical analytical tools to evaluate and verify the result of the participants' response. Moreover, a reliability test was carried out to check the consistency of the variables used as well as the authenticity. This study is one of a handful few that carries out such reliability test for the stress affecting research assistants.

5.2.2 Recommendations

Looking at this from an administrative perspective, there is a need for the university authorities to evaluate how funding, health insurance and the general academic ecosystem can be efficiently managed in order to reduce the stress that is associated with research assistants. As funding for several projects become increasingly demanding, it can have a negative impact on research assistants who need funding for their various projects as well as to settle their tuition. According to a research carried out by Panigrahi (2017), seven management practices can be employed in any organization in order to reduce the stress that workers face in carrying out their daily

task. This management practises that was defined by Panigrahi (2017), can also be applicable for research assistants. This includes:

- a) **Long working hours should be reduced:** There is need for the management to look into the working hours of their research assistants and reduce number of hours for the ones that bear too much responsibilities. Furthermore, proper time management techniques need to be taught to them, and scheduling management software should be enforced for time management.
- b) **Work-life Balance:** Mandatory training should be given to research assistants on how to properly maintain an effective work-life balance.
- c) **Communication:** There is need for the management to encourage communication within the establishment amongst research assistants and employer. HR managers as well as guidance counsellors should easily be accessible to provide support care and support to the research assitants. Moreover, the management of the university should follow up on any feedback and suggestion given by the research assistants to improve the conditions of the working environment to tackle stress.
- d) **Security Fears:** There is need for safety checks to be carried out within an establishment in order to give research assistants assurance of safety. Also, laws should be put in place to discourage unauthorized access to offices, classes, and buildings.
- e) **Encouraging Successful Employees with Bonuses:** There is need for management to improve the working dynamics of the university by encouraging research assistants who do exceptionally well by rewarding them with bonuses. This will help to counter the stress that goes with the job and encourage others to do their best within the establishment.

- f) **Fear of downsizing and Job stability:** Economic crisis can be a very intricate issue to understand and so, downsizing and layoffs are enforced by many companies. This is subjective and so, there little that can be done to stop this. However, the manner at which it is done can help alleviate the stress that comes with this problem.
- g) **Seminars and recreational facilities:** Encouraging research assistants to attend seminars that discuss on how to better manage stress and building recreational facilities aimed at reducing stress level within the establishment will go a long way in improving the wellbeing of the research assistants.

5.2.3 Limitations and Future Research

The Eastern Mediterranean University is one of the major Universities in Northern Cyprus offering several Graduate Programs to both local and foreign students. The University has hundreds of Research Assistants across the faculties. This particular research was conducted in the University in order to ascertain “The Impact of Stress on the Productivity of Research Assistants in Eastern Mediterranean University”. In carrying out the research, five major faculties were chosen i.e. communication and media studies, business and economics, engineering, architecture, art and sciences and tourism. These five faculties were selected due to time constraints as well as accessibility challenges faced in other faculties. Moreover, the major limit of this research was that the Research Assistants from other neighbouring universities weren’t accounted for in this research. Universities like Girne America University, Cyprus International University and Near East University. Moreover, the sample size of data was limited to 100 Research Assistants. As a result of the smaller sample size across for each of the stressor groups, the power of some of the relationship was limited and so, it is quite possible that a larger sample size would have given rise to a greater

number of significant comparisons. Nonetheless, the sample size was good enough to provide credible data analysis using the quantitative methodology. For future research in this field, my suggestion will be to add more variables that are responsible for causing stress within the university. And could very much, have a significant impact on the productivity of the research assistants. This could actually be indirectly causing stress and these variables could be social activities, social norms, religion, etc. Following this, an interview should be conducted with some of the research assistants as well as top professors in the field of psychology and sociology, to hear what they have to say concerning stress impact on productivity. Moreover, this will help in piecing together a more concrete hypothesis, that will be used in carrying out our analysis.

REFERENCES

- Abhishek S., Rajeev S. and Tahir N. (2016). Examining the effect of emotional intelligence on socio-demographic variable and job stress among retail workers. *Cogent Business & Management* 3:1.
- Arnold, J., Cooper, C. L., and Robertson, I. T. (1995). *Work psychology. Understanding human behaviour in the workplace* (2nd ed.). London: Pitman Publishing.
- Arnold, J., Cooper, L. and Robertson, I.T. (1991). *Work Psychology*. London: Pitman Publishing.
- Arnold, J., Robertson, I., and Cooper, C. (1993). *Work Psychology: Understanding Human Behaviour in the Workplace* London : FT PitmanJohns
- Atalayin, C., Balkis, M., Tezel, H., Onal, B., and Kayrak, G. (2015). The prevalence and consequences of burnout on a group of preclinical dental students. *European journal of dentistry*, 9(3), 356–363. <https://doi.org/10.4103/1305-7456.163227>
- Barlow, D. H., and Craske, M. G. (2006). The Nature of Panic Disorder and Agoraphobia. *Mastery of Your Anxiety and Panic: Workbook*, 1–26. doi: 10.1093/med:psych/9780195311358.003.0001
- Betts, P.W. (1993). *Supervisory Management*. 6th Ed. London: Pitman Publishing.

- Blumenthal, D., and Bergstrom, A. (2003). Brand councils that care: Towards the convergence of branding and corporate social responsibility. *Journal of Brand Management*,10(4), 327-341. doi:10.1057/palgrave.bm.2540128
- Buckingham, A., and Saunders, P. (2004). *The survey methods workbook: From design to analysis*. Cambridge, UK: Polity.
- Cahir, N., and Morris, R. D. (1991). The Psychology Student Stress Questionnaire. *Journal of Clinical Psychology*,47(3), 414-417. doi:10.1002/1097-4679(199105)47:33.0.co;2-m
- Chase, R. B., Jacobs, F. R., and Aquilano, N. J. (2006). *Production and operations management: Manufacturing and services*. New York: Mc Graw-Hill.
- Cohen, J. (1988) *Statistical Power Analysis for the Behavioral Sciences*, 2nd ed. Hillsdale, NJ: Erlbaum.
- Cook, B. G., and Cook, L. (2008). Nonexperimental Quantitative Research and Its Role in Guiding Instruction. *Intervention in School and Clinic*, 44(2), 98-104
- Dizgah, M. R., Chegini, M. G., and Bisokhan, R. (2012). Relationship between Job Satisfaction and Worker Job Performance in Guilan Public Sector. *Journal of Basic and Applied Scientific Research* 2(2), 1735-1741.
- Du Brin, A.J. (1996). *Human Relations for Career and Personal Success*. New Jersey: Prentice Hall.

Duba-Biedermann, L. (1994). Graduate assistant development: Problem of role ambiguity and faculty supervision. *The Journal of Graduate Teaching Assistant Development*, 1, (3), 119-126.

Essel, G., and Owusu, P. (2017). Causes of students' stress, its effects on their academic success, and stress management by students (Doctoral dissertation, Case study at Seinäjoki University of Applied Sciences, Finland, 2017) (pp. 10-82). SEINÄJOKI UNIVERSITY OF APPLIED SCIENCES.

Ferguson, L. M., Yonge, O., and Myrick, F. (2004). Students Involvement in Faculty Research: Ethical and Methodological Issues. *International Journal of Qualitative Methods*, 3(4), 56-68. doi:10.1177/160940690400300405

Freudenberger, H. J. (1974), Staff Burn-Out. *Journal of Social Issues*, 30: 159-165. doi:10.1111/j.1540-4560.1974.tb00706.x

Goplerud, E. N. (1980). Social support and stress during the first year of graduate school. *Professional Psychology*, 11(2), 283-290. <http://dx.doi.org/10.1037/0735-7028.11.2.283>

Great Britain: Health and Safety Executive. (2019). Tackling Work-Related Stress Using. *The Management Standards Approach: a step-by-step workbook*. S.l.: HSE BOOKS.

Greenberg, J., Solomon, S., Pyszczynski, T., Rosenblatt, A., and Al, E. (1992). Why do people need self-esteem? Converging evidence that self-esteem serves an

anxiety-buffering function. *Journal of Personality and Social Psychology*, 63(6), 913-922. doi:10.1037//0022-3514.63.6.913

Hoover, E. (2003, December 5). More help for troubled students. *The Chronicles of Higher Education*. pp A25- A26.

Jack, L., Scharalda, J. G., Jones-Jack, N. H., and Kirchain, W. R. (2010). Appraising Quantitative Research in Health Education: Guidelines for Public Health Educators. *Health Promotion Practice*, 11(2), 161-165.

Jaffe-Gill, E., Smith, M., Larson, H., and Segal J. (2007). Understanding stress: Signs, symptoms, causes, and effects. [Online]. Retrieved from: http://www.helpguide.org/mental/stress_signs.htm on January 4, 2019

Jex, S. M., and Beehr, T. A. (1991). Emerging theoretical and methodological issues in the study of work-related stress. *Research in Personnel and Human Resources Management*, 9, 311-365.

Kahn, R. L., Wolfe, D. M., Quinn, R. P., Snoek, J. D., and Rosenthal, R. A. (1964). *Organizational stress: Studies in role conflict and ambiguity*. New York: Wiley

Layton, J. (2016). How fear works. [Retrieved 18 March, 2019]. Available at: <http://science.howstuffworks.com>

Lazarus, R. (2003). From psychological stress to the emotions: A history of changing outlook. *Annual Review of Psychology*. pp. 1-21

Mathis, R.L. and Jackson, J.H. (2000) Human Resource Management. South Western Collage Publishing, Ohio.

May, R. (2015). The meaning of anxiety. New York: w.w. Norton & company Ltd.

Moorhead, H. and Griffen, F. (1998). Organisational Behaviour. Boston: Houghton Mifflin Company.

Omolayo, B. O., and Omole, O. C. (2013). Influence of mental workload on job performance. International Journal of Humanities and Social Science, 3(15), 238-246.

P Thompson and D McHugh (2nd ed) (1995) Work Organisations: A Critical Introduction MacMillan, London. Journal of Management & Organization, 4(1), 53-55. doi:10.1017/S1833367200005836

Panigrahi, A. (2017). Managing Stress at Workplace. Journal of Management Research and Analysis. 3. 154-160.

Peterson, G. D., Cumming, G. S., and Carpenter, S. R. (2003). Scenario Planning: A Tool for Conservation in an Uncertain World. Conservation Biology, 17(2), 358-366. doi:10.1046/j.1523-1739.2003.01491.x

Public Services. (2007). Stresswise-Preventing-Work related stress. A guide for workers. Controlling OHS Haazard

Robbins, S.P. (2004). *Organisation Behaviour*. 11th Ed. New Jersey: Pearson Prentice

Hall

Schneiderman, N., Ironson, G., and Siegel, S. D. (2005). Stress and Health: Psychological, Behavioral, and Biological Determinants. *Annual Review of Clinical Psychology*, 1(1), 607-628.
doi:10.1146/annurev.clinpsy.1.102803.144141

Selye, H. (1950). Stress and the General Adaptation Syndrome. *British Medical Journal*, 1(4667), 1383–1392.

Stavroula L., Amanda G. and Tom C (2004). Work organization & stress. Systematic problem approaches for employers, managers and trade union representatives. *Protecting Workers' Health Series No. 3*. World Health Organization. pp.1-35

Stecker, T. (2004). Well-being in an academic environment. *Medical Education*, 38(5), 465-478. doi:10.1046/j.1365-2929.2004.01812.x

Steers, J. (1995). The National Curriculum: Reformation or Preservation of the Status Quo? *Journal of Art & Design Education*, 14(2), 129-137. doi:10.1111/j.1476-8070.1995.tb00619.x

Taylor, S. (1995). *Managing People at Work*. London: Reed Educational and Professional Publishing Ltd

Taylor, S. (2005). *Managing People at Work*. London: Reed Educational and Professional Publishing Ltd.

Unimed (2016). Stress related to Stress: https://www.unimed.coop.br/viver-bem/saude-empauta/estresse-lacionadootrabalho?cd_canal=49146&cd_secao=49139&cd_materia=405901

APPENDIX

Questionnaire

QUESTIONNAIRE ON THE IMPACT OF STRESS ON RESEARCH ASSISTANTS

Dear Researcher,

My name is Opukiri Perewari, a graduate student from the Department of Business Administration, Eastern Mediterranean University. I am conducting research on the impact of worker's stress on the productivity of research assistants in EMU. I want to make it clear that all data that will be acquired from this questionnaire is intended for research purposes only and so, your information will not be disclosed to any other party. Please, I would like you to answer all question accurately and most importantly, take your time in going through the questions carefully. Thank you for your time, all the best.

SECTION A: Demographic Information

1. What is your Nationality?

(a) Turkish (b) Iranian (c) Nigerian (d) Cypriot (e) Other (please specify)

2. What is your age?

(a) 16-19 (b) 20-25 (c) 26-30 (d) 31-35 (e) 35- and above _____

3. What is your gender?

(a) Male (b) Female

- 4. What is your marital status?**
(a) Single (b) Married (c) Divorced (d) I don't want to mention
- 5. Where do you reside in North Cyprus?**
(a) Lefkosa (b) Magusa (c) Girne (d) other (please specify) _____
- 6. What is your faculty?**
(a) Communication and Media Studies (b) Business & Economics (c) Engineering (d) Architecture (e) Arts & Sciences (f) Pharmacy & Medicine (g) Tourism (h) Others (please specify) _____
- 7. What is your department?** _____
- 8. What is your program type?**
(a) Masters (b) PHD

SECTION B: Identification of the worker's stress that positively or negatively impact the productivity of the Research Assistants.

- 9. Have you ever felt stress during your work?** (a) Yes (b) No
- 10. How often do you feel stressed?** (a) Always Usually (b) Sometimes (c) Rarely (d) Never (e) Do not know
- 11. How many hours do you work in a week as a research assistant?** (a) 10hrs (b) 20hrs (c) 30hrs (d) 40hrs (e) 50hrs or more
- 12. How many courses do you teach?** (a) 1-2 (b) 3-4 (c) 5-6 (d) 6-7 (e) 8 or more
- 13. Have you ever thought of giving up your job as a researcher because of the stress?** (a) Yes (b) No

Which of the following will you identify as the significant sources of stress in your working environment? (Please tick all that applies)

14.	Pressures from work (Colleagues, Students, Instructor etc.)	
15.	Inadequate support at work	
16.	High unpredictability of job pattern	
17.	Work & Family life	
18.	Long Working hours	
19.	High Working load	
20.	Inadequate monetary reward or insufficient salary	
21.	Noise and distractions.	
22.	Comfort level at the office	
23.	Safety (Unsafe working environment, exposure to harsh conditions)	
24.	Job security	

25.	Coping with personal study and teaching responsibilities	
26.	Lack of proper tools for the job	
27.	Lack of control and decision making opportunities on matters that concern you	
28.	Lower grade	
29.	Language difficulties	
30.	Financial Difficulties	

SECTION C: Worker’s stress impact on productivity of the research assistants

(Please specify 1: Strongly agree 2: Agree 3: Disagree 4: Strongly disagree 5. Undecided)

31.	I feel more stressed when I am sweating, my heart rate is elevated, and I am disorientated.	1	2	3	4	5
32.	I am more stressed when I am being asked to do more that my ability permits	1	2	3	4	5
33.	My overall job performance is compromised when I am stressed	1	2	3	4	5
34.	Stress at work affects my relationship at home and with peers	1	2	3	4	5
35.	Stress at work affects my commitment and passion.	1	2	3	4	5
36.	Stress at work affects my grade and teaching dynamics.	1	2	3	4	5
37.	Stress at work causes me to come late to the office, class etc.	1	2	3	4	5
38.	My level of concentration drops when I am stressed	1	2	3	4	5

39.	Stress at work pushes me to be more quicker and efficient in performing my task as far as it doesn't exceed the threshold of what i can handle.	1	2	3	4	5
40.	Pressure at work has affected my health whilst working in this Institution.	1	2	3	4	5
41.	Stress at work improves my problem solving skills by making me think more.	1	2	3	4	5
42.	Stress at work has been helpful in improving my managerial skills and dexterity.	1	2	3	4	5
43.	I smoke more often or take more breaks when I am stressed at work.	1	2	3	4	5