

COGNITIVE APPRAISALS, COPING, AND PSYCHOLOGICAL PROBLEMS
AMONG BOĞAZİÇİ UNIVERSITY ENGLISH PREPARATORY STUDENTS

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Ezgi Özkök Yılmaz

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DECLARATION OF ORIGINALITY

I, Ezgi Özkök Yılmaz, certify that

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ABSTRACT

Cognitive Appraisals, Coping and Psychological Problems among Boğaziçi University English Preparatory Students

The aim of the current study was to explore the relationships among daily hassles, life events, cognitive appraisals, ways of coping, and psychological problems of Boğaziçi University English preparatory students. The dynamic interplay between study variables was examined in line with the Lazarus and Folkman's Transactional Theory of Stress. The sample was composed of 270 students (146 female, 124 male), and the data was collected by the Daily Hassles Scale, the Life Events Scale, the Stress Appraisal Measure, the Ways of Coping Questionnaire, and the BÜREM (Boğaziçi University Guidance and Psychological Counseling Center) Intake Form. The analyses partially supported the mediating role of coping on the relationship between cognitive appraisals and psychological problems. Regardless of having available resources to deal with the stressors, Planful Problem Solving predicted fewer psychological problems. The partial mediating roles of Planful Problem Solving and Accept Responsibility were supported. Moreover, the moderating effects of cognitive appraisals and ways of coping were supported. Daily Hassles more strongly predicted psychological problems for high levels of Threat appraisal than lower levels. For low levels of Control appraisal, Life Events more strongly predicted psychological problems. Daily Hassles more strongly predicted psychological problems for high levels of Accept Responsibility than low levels.

ÖZET

Boğaziçi Üniversitesi Hazırlık Öğrencilerinde Bilişsel Değerlendirmeler, Başa Çıkma Yolları ve Psikolojik Problemler

Bu çalışmanın amacı Boğaziçi Üniversitesi Hazırlık öğrencilerinin yaşadığı gündelik sıkıntılar, yaşam olayları, bilişsel değerlendirmeleri, başa çıkma yolları, psikolojik problemleri arasındaki ilişkiyi araştırmaktır. Çalışmanın değişkenleri arasındaki dinamik ilişki Lazarus ve Folkman'ın Etkileşimsel Stres Modeli ile incelenmiştir. Çalışmanın örneklemini 270 öğrenciden (146 kadın, 124 erkek) oluşmuş, veriler Gündelik Sıkıntılar Ölçeği, Yaşam Olayları Ölçeği, Stres Değerlendirme Ölçeği, Başa Çıkma Yolları Ölçeği ve BÜREM (Boğaziçi Üniversitesi Rehberlik ve Psikolojik Danışmanlık Merkezi) Öngörüşme Formu aracılığıyla toplanmıştır. Yapılan çözümlemeler Modeldeki başa çıkma yollarının bilişsel değerlendirmeler ve psikolojik problemler arasındaki aracı rolünü kısmen desteklemiştir. Stresle baş etmede kullanılabilir kaynakların varlığından bağımsız olarak, Planlı Problem Çözmenin daha az psikolojik problem varlığını yordadığı görülmüştür. Planlı Problem Çözmenin ve Sorumluluğu Kabullenmenin kısmi aracı rolü desteklenmiştir. Ayrıca, bilişsel değerlendirmeler ve başa çıkmanın moderatör etkisi kısmen desteklenmiştir. Gündelik Sıkıntılar, Yüksek Tehdit algısı için daha fazla psikolojik problem varlığını yordamıştır. Düşük Kontrol algısı için, Yaşam Olayları daha fazla psikolojik problem varlığını yordamıştır. Gündelik Sıkıntılar, Yüksek Sorumluluğu Kabullenme başa çıkma yolu için daha fazla psikolojik problem varlığını yordamıştır.

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CHAPTER 1

INTRODUCTION

One of the most prominent aspects of human experience is that it constantly goes through continuous change. In the face of a change, people need to adjust to the new situation or environment. Stress arises as a perceived imbalance in the interface among an individual, the environment and other individuals. Although physiological changes or nature events as climate changes, earthquakes, and hurricanes are intended to ensure homeostasis, people tend to perceive all kinds of change as a threat to their own integrity (Lazarus & Folkman, 1987). In this sense, stress can be seen as a matter of personal interpretation of an internal or external stimulus.

Stress has been a widely used term in many spheres. As a notion it has referred to hardship or adversity as can be found as early as the fourteenth century (Lumsden, as cited in Lazarus 1993a). Both as a noun and a verb, this word could refer to a wide array of meanings. Some of the very common usages have been pressure or tension, a state of mental or emotional strain resulting from adverse or demanding situations, body's method of reacting to a challenge (Stress, 2015). Stress was defined as "a process in which environmental demands tax or exceed the adaptive capacity of an organism, resulting in psychological and biological changes that may place persons at risk for disease" (Cohen, Kessler, & Gordon, 1997, p. 3). This definition relieved the word "stress" from being a general rubric for related research areas. First, it suggested a process model rather than a static causal relationship of stimulus and outcome. Second, it referred to the environmental, biological, and psychological domains help researchers integrate previous study findings.

Stress theories have been many in number. These theories can be classified under three main headings: biological, psychological, and resource theories of stress. Physiological theories of stress (Selye, 1976) have attempted to explain the human body's reaction to various stressors. Selye (1976, p. 64) defined this stress as "a state manifested by a syndrome which consists of all the non-specifically induced changes in a biologic system." On the other hand, the roles of expectations, personality traits, and appraisals that are played on individual differences to stressful events were discussed in the psychological theories of stress. Coping appeared as a central concept in psychological theories such as animal model and ego psychology model (Lazarus & Folkman, 1987). By studying coping, it was aimed to understand how coping behaviors reduce, increase or prevent stress reactions from happening again. Unlike the other two, resource theories were concerned with the factors that maintain psychological health in the face of stressful situations. Constructs such as social support (Schwarzer & Leppin 1991), hardiness (Kobasa, 1979), self-efficacy (Bandura, 1977), or optimism (Scheier & Carver 1993) were suggested to study this phenomenon.

In the current study, the transactional theory of stress (Lazarus & Folkman, 1984), which can be seen as a part of psychological theories of stress, was adopted due to its power to embrace different mechanisms through which the complexity of stress can be fully explored. According to the theory, stressful experiences can be understood through person-environment interactions. Individuals evaluate stressful situations first by assessing the level of threat created by the stressor (primary appraisal) and the accessibility of means to deal with the threat (secondary appraisal). Moreover, appraisals of the stressor's significance and controllability may anticipate specific coping strategies (Long, 1990; Parkes, 1986) which comprise the

second intervening agent in Lazarus' stress theory. The dynamic interplay between the stressors, cognitive appraisals, and coping in explaining psychological health was studied to better reflect on the phenomenon in the present study.

1.1 Background of the study

Along with many other life experiences, starting to study at a university is a major change in life. The first year in college is regarded as one of the most stressful periods in a lifetime. Some of the potential problems that university students confront include adaptation encounters, such as being apart from family and friends, adjusting to the new educational system, taking charge of daily living and developing new kinds of social interaction with peers and faculty members (Henton, Lamke, Murphy, & Hayres, 1980). A meta-analysis of 40 qualitative studies (Hurst, Baranik, & Daniel, 2013) revealed eight different themes of college stress; relationships, lack of resources, expectations, academics, environment, diversity, transitions, and others (career, extracurricular activities, health and personal appearance).

Studies on college stressors among Turkish university students provided significant data on both perceived stress levels of the students and identification of various problem areas leading to stress reactions (Altundağ, 2011; Bilgin, 2001; Durak-Batıgün, & Atay-Kayış, 2014; Erkan, Özbay, Çankaya, & Terzi, 2012; Saraçoğlu, 1993; Yazıcı, 2003). All these studies stated high levels of perceived stress among university students. Among the most common factors leading to high levels of stress are academic concerns, relationship problems, career opportunities, and lack of resources.

The student selection and placement system in Turkey is composed of two parts: the first exam is called "YGS" (the Turkish acronym for the Higher Education Examination) and the second exam is called "LYS" (the Turkish acronym for the

Undergraduate Placement Examination). Both are standardized multiple-choice tests covering the high school curriculum. According to ÖSYM (the Turkish acronym for the Student Selection and Placement Center) statistics in 2015, 2.126.684 students applied for the YGS exam; and 1.368.941 of these students gained the opportunity to apply for the LYS exam through obtaining the passing grade established by ÖSYM (2015 YGS Sonucları, 2015). The total quota of two-year degree programs, undergraduate programs, and special talent programs (e.g., conservatoire or cordon bleu) in Turkey and Turkish Republic of Northern Cyprus, including state and private universities are 1.056.129 in 2015. Therefore, the chances of being placed in any higher education program are almost equal to not being placed, according to the statistics. That brutal competition can cause great amounts of stress for Turkish students and parents.

In addition to the stressful competition to enter any higher education program, entering a program in Boğaziçi University is another kind of competition. Boğaziçi University is one of oldest (1863) and most respected universities in Turkey. Thus, Boğaziçi University generally accepts students from students who score in the top 1% on the university entrance exam. Therefore, candidates for this university assume a highly stressful preparation period to have a chance to enter a program.

After coming through a challenging university entrance exam (YGS and LYS) and being placed into a program in Boğaziçi University, students feel like enjoying their accomplishments for a while. Because English is the language of instruction, however, Boğaziçi University demands another test performance, which is the English proficiency exam. The prospective students whose English language competency falls below the expected scores find themselves facing yet another challenging task. Thus, these future students are more likely to experience a

discrepancy between their expected and actual performances at the beginning of their preparatory year, which is known by the term performance expectations. Along with that, test anxiety can also serve as an educational stressor if the student thinks he or she will not perform well on this test. Thus, academic stressors such as test anxiety and performance expectations are likely to contribute to perceived stress level of Boğaziçi University English Preparatory students.

In addition to academic challenges in a highly competitive environment, adjustment to the university regimen, social life, and the metropolitan city life (59 % of the students were from cities, towns, and villages outside Istanbul between 2009 and 2013 (Facts and Figures: Boğaziçi University, 2014) can be overwhelming for new students. Moreover, university life generates new forms of relationships with adults as well as peers. Students lack the support systems they were accustomed to from their families and friends. Since most of them live in dormitories and not yet enclosed by departmental networks, they may not find the necessary protective networks. Also, despite the presence of student support services, some students are not used to asking for help. Along with the academic struggles, these social challenges are possible stressors for preparatory students.

The Boğaziçi University Guidance and Psychological Counseling Center (Turkish acronym, BÜREM) was established to offer psychological support for registered students. Individual counseling and group counseling are provided for students in need. However, the students who applied for this service needed to wait for a period of time because of the demands that exceeded the service capacities. Preparatory classes are located in three campuses: the North Campus, the South Campus, and the Kilyos Saritepe Campus. The first two are in the same neighborhood as BÜREM but the Saritepe Campus is a one-hour ride from these

main campuses. In addition, a significant majority of the prep students who study and live on the Saritepe Campus have relatively limited extracurricular activities and facilities. To help Saritepe students deal with this isolation, the university administration first increased the number of activities on the campus, and then supported student club activities there. Finally, in the winter of 2014, BÜSOD (Turkish acronym for Student Support Unit of Boğaziçi University Saritepe Campus) was initiated as a new student support unit for students on the Saritepe Campus. Although these efforts assisted newcomers in better adapting to university life, the challenging nature of the preparatory year was still a significant source of stress that needed to be addressed.

1.2 Purpose of the study

The primary aim of this study was to understand the relationship between daily hassles, life events, cognitive appraisals, and ways of coping and psychological well-being in the stress process of Boğaziçi University English preparatory students. Both daily hassles and major life events were used as indicators of stress due to their unique contributions in the stress literature (DeLongis, Coyne, Dakof, Folkman, & Lazarus, 1982; Falconier, Nussbeck, Bodenmann, Schneider, & Bradbury, 2015; Lyon, 2000). While studying this relationship, the transactional theory of stress (Lazarus & Folkman, 1984) was adopted to better depict the complexity of the interplay of these factors. A secondary motive was to capture the distribution of the problem areas in a non-clinical population as measured by the BÜREM Intake Form.

The research questions of the current study were the following:

1. Do ways of coping mediate the relationship between cognitive appraisals and psychological problems?

- 2.1 Do different types of cognitive appraisals moderate the relationship between daily hassles and psychological problems reported by the students?
- 2.2 Do different types of cognitive appraisals moderate the relationship between life events and psychological problems reported by the students?
- 3.1 Do different ways of coping moderate the relationship between daily hassles and psychological problems reported by the students?
- 3.2 Do different ways of coping moderate the relationship between life events and psychological problems reported by the students?

1.3 Significance of the study

Although I studied a year of preparatory English as an undergraduate student in 2004, my first enlightening encounter with the Boğaziçi University English prep students' case was when I took the peer guidance elective courses. Since I was born and raised in Istanbul, I suffered neither from the city life nor being apart from my family. The major task of ours as peer supporters who were trained in these courses was to support the English preparatory students of our department. As a requirement of the Peer Guidance courses, we visited the Sarıtepe campus prep students and spent time with them. During those visits as well as our one-to-one meetings with the paired prep students, I came to understand the difficulties of the prep year. The Sarıtepe campus, where the majority of prep students study, is relatively far from the city center (approximately 40/25 km/miles to Taksim Square) and it had very limited extracurricular opportunities. At the time, the student clubs were centered at the North and South campuses, as most activity organizing students who study in these campuses did not choose to take, at least an hour long bus ride from Sarıtepe campus. Together with the challenge of preparing for the English proficiency exam, inadequate social resources were compounding prep students' possible stressors.

Along with my experience in peer guidance coursework, my internship as a master's student at BÜREM gave me a deeper insight into preparatory students' challenging conditions. I observed prep students applying for psychoeducational support such as dealing with exam anxiety, performance anxiety, time management and so forth. The number of prep students applying for psychological support services (BÜREM) gradually increased over the years. Even after accounting for the increase in student enrollment and visibility, recognition, and accessibility of support services, the rising number of applicants warranted our attention. Despite the travel required to receive services at BÜREM, prep students constituted the majority of applicants. Drops in the number of applicants were observed only after BÜSOD was put into their service.

In line with my experience, I wondered why some students suffered from stressors while others managed to deal with them. To understand stress reactions of students, a number of stressors and their influences need to be studied. However, the amount of perceived stress would not be enough to study this complex phenomenon. The literature on stress points out a wide range of factors to be studied (Selye, 1976; Lazarus & Folkman, 1984). Among others, the transactional theory of stress, appraisal and coping proposes an enhanced model to understand the interaction between a person and the environment (Lazarus & Folkman, 1984). Thus, I aimed to identify variations in cognitive appraisals, i.e. how students evaluate stressful situations. Different ways of coping which were used during this stressful period were then addressed. Hence, the relationships between stressors, cognitive appraisals, coping styles, and psychological well-being could be studied.

Although stress studies are many in number, due to the complexity of the nature of stress and the unmanageable number of factors possibly playing a role in

stress outcomes, studies of stress in Turkey (Dalmaz, 2009; Kesimci, 2003) usually examine a set of characteristics or variables related to stress. Among other factors in the stress literature, cognitive appraisals of a stressful encounter have rarely been studied in a Turkish sample (Alkan, 2004; Durak, 2007). From this standpoint, the scope and the sample of the current study has a contribution potential for Turkish literature.

In addition to identifying a possible pattern in understanding the stress process for Boğaziçi University prep students, the results of the current study can be utilized and analyzed by the professionals working in student support services. Preventive measures can be suggested and intervention programs can be planned to help students deal better with the stressors.

CHAPTER 2

LITERATURE REVIEW

This section provides a review of the related literature in order to provide a background on the theoretical and the empirical basis of the study. In this part, daily hassles, life events, and their role on well-being are discussed via related studies. Cognitive appraisals, as a key concept of the transactional theory of stress, are described. Coping strategies, as a central notion in stress studies are then discussed. Finally, the relationships among daily hassles, life events, cognitive appraisals, and ways of coping and psychological well-being are explained in terms of theoretical and statistical perspectives.

2.1 Daily hassles and life events

The stress literature generally ascertains two types of stressors: daily hassles and major life events. Daily hassles are defined as commonly occurring stressors which are less severe in nature than major life events (Lyon, 2000). Although early research on stress concentrated on major life events (Lyon, 2000), studies of the 1980s revealed that daily hassles were better predictors of health status (DeLongis, Coyne, Dakof, Folkman, & Lazarus, 1982) and psychological symptoms (Kanner, Coyne, Schaefer, & Lazarus, 1981) than major life events.

Life events were described as major happenings at a specific time period which have severe effects. These life events are not only relatively negative experiences such as a divorce or being fired, they could also be neutral or relatively positive such as marriage and getting a raise. Although one may think that the effect of life events on psychological well-being is obvious, there has been debate in the literature about this notion. Especially in longitudinal studies, researchers revealed

that life events have long-lasting effects on psychological well-being (Lucas, 2005, 2007; Lucas, Clark, Georgellis, & Diener, 2003, 2004). In a meta-analysis, the effects of life events on cognitive and affective well-being were discussed (Luhmann, Hofmann, Eid, & Lucas, 2012). The results showed that the effects of life events on cognitive well-being were more consistent and stronger across samples. Other researchers insisted that the effect of life events on well-being did not last because people got accustomed to their existence (Brickman & Campbell, 1971; Frederick & Loewenstein, 1999; Headey & Wearing, 1989, 1992; Lykken & Tellegen, 1996).

Theorists have proposed different opinions on how life events influence a person's daily life. Hinkle (1974) suggested that major life events may be operating through their impact on day-to-day hassles. For example, marriage might create a pool of minor loads such as cooking, taking care of the household, financing, being a full-time companion to another. Thus, life events would indicate a change or disruption in one's social relationships, personal habits and routines, and inevitably health. From this standpoint, distress created by daily hassles could be seen as a mediator of the life events (Kaplan, 1979). Similarly, a relationship between life events and daily hassles was suggested, where major life events could increase the frequency of the daily problems and disturbances (Nezu, 1986; Nezu 1985; Yerlikaya, 2009). Last but not least, the suggested association between these two kinds of stressors was that chronic stressors moderated the relationship between daily hassles and psychological well-being (Serido, Almeida, & Wethington, 2004).

Consequently, in the search for measuring and understanding stress, in addition to major life events, minor but repetitive daily problems, daily hassles, are also considered. Hassles have been defined as the infuriating, frustrating, upsetting

demands that to some extent describe a person's daily interactions with the environment. They include annoying practical problems such as forgetting things or traffic jams and unplanned happenings such as intemperate weather, as well as disappointments, financial concerns and interpersonal conflicts. Since every person experiences daily hassles to a certain degree, the influence of hassles on well-being must be governed by their frequency, the intensification of hassles in a crisis situation, or the presence of recurrent hassles. Therefore, not only the number of happenings or the cumulative number of daily hassles but also the content and their connotation in a person's life need to be assessed.

Research showed that daily hassles were significantly related to amplified somatic symptoms (DeLongis et al., 1982) as well as decreased health conditions and positive mood (DeLongis et al., 1988) when accounted for life events. In the associated literature, college students generally experience an extensive amount and different kinds of stressors such as academic (exams, classes), social (romantic relationships and friendships) and developmental (identity development). Larson (2006) stated that among the different kinds of stress, the academic one was most likely to be perceived as the most stressful. One of the national non-profit research organizations in the USA, Columbia University's Center on Addiction and Substance Abuse (CASA) conducted a national survey among college students (National Survey of American Attitudes, 2007) that revealed 75% of the students feel overwhelmed; some of them frequently (33%) and some of them occasionally (42%). It has also been underlined by CASA that 88% of students stated stress as a problem to their fellow school-mates. That suggested that recurring daily problems were related to psychological problems more than life events.

There is a wide body of studies establishing a link between daily hassles and overall physical and psychological well-being. Daily hassles are significantly correlated with psychological symptoms (Kanner et al., 1981; Lu, 1991; Falconier et al., 2015) even after accounting for the previous symptomology. In their study of the development of a daily hassles scale for adolescents, Wright, Creed, and Zimmer-Gembeck (2010) stated that daily hassles were significantly correlated with depression and anxiety and negatively correlated with life satisfaction. Sher (2004) suggested that ongoing stress, i.e. daily hassles, contributed to an increase in cortisol levels, which in turn led to the onset of depressive symptoms. The effects of daily hassles on unhealthy eating habits were studied (O'Connor, Jones, Conner, McMillan, & Ferguson, 2008). The results showed that an increase in daily hassles was accompanied by high-fat and high-sugar meals and snacks and lowering of balanced diet. Another set of research (Lackner, Brasel, Quigley, Keefer, Krasner, Powell & Sitrin, 2010; Dancey, Taghavi & Fox, 1998) supported the relationship between prolonged stress and irritable bowel syndrome. Nezu and Ronan (1985) reported that the frequency of everyday problems had a direct effect on the level of depressive symptoms in college students.

It seemed that daily hassles have a clearer relationship with psychological problems than life events. The effect of life events on psychological problems is, however, more complicated. Thus, in this study the effectiveness of these factors to predict psychological problems was studied as well as their relationship with each other and other variables.

2.2 Cognitive appraisals and psychological problems

In its general sense, cognitive appraisal is an individual's mental evaluation of a situation. Not all people perceive a situation in the same way. Researchers, while

studying how people's reaction to the same phenomenon differs, focused on perceptions and mental evaluations. The type of appraisal used in a research depends on the topic of interest. For instance, in a study of high-risk behaviors among college students, Copeland, Kulesza, Patterson and Terlecki (2009) used the Cognitive Appraisal of Risky Events scale to assess anticipated risk, benefit, and involvement in high-risk behaviors. Another study was conducted to understand consumer behaviors (Kumar and Oliver, 1997). Consumer appraisals (both before and after purchase) were studied in terms of being pleasant/unpleasant, motive consistent/inconsistent, favorable/unfavorable/surprising as such. Haley and his colleagues (2004) categorized cognitive appraisal of caregiving experience into bothering and gaining positive aspects to study the well-being of African-American and Caucasian dementia caregivers. In this study, cognitive appraisals were studied in line with the classification of Lazarus and Folkman (1984).

Cognitive appraisal has been another widely studied topic in the stress literature. In evaluating a stress-provoking situation, the individual tries to understand whether or not the situation is threatening to his or her well-being. This evaluation process consists of two stages, namely, primary and secondary appraisals (Lazarus & Folkman, 1984). In the primary appraisal stage, the individual evaluates the stressful situation as threatening, challenging or harmful for him/herself. In the secondary appraisal stage, the individual evaluates his or her basic resources which seem suitable for the coping process. In other words, two relevant questions are "What is at stake?" (primary appraisals) and "What are my resources for dealing with this situation?" (secondary appraisals).

Lazarus and Folkman (1984) suggested that a person-environment transaction is first manifested by how an individual "appraises" the situation in the face of a

stressor. According to the transactional theory, when a person experiences a potential stressor, the primary appraisal process is activated. At this stage, the situation is either challenging or threatening/harmful to the person in relation to the level of perceived hazard. Then, the secondary appraisals provide the individual with an overall assessment of his/her personal resources for dealing with the situation. Alternatively, the secondary appraisal is described as an assessment as to “which coping options are available, the likelihood that one can apply a particular strategy or set of strategies effectively” (Lazarus & Folkman, 1984, p 35). Three dimensions to secondary appraisals are controllability, other-control, and uncontrollability. These dimensions classify the individual’s evaluation of the stressful situation as possible to be dealt with either his/her own resources, with the help of others, or impossible to be handled.

Putting cognitive appraisal into the equation, stress studies have become process oriented rather than based on input-output relationship. Claiming that a person’s evaluation of a situation is what makes it stressful (or not) unburdens the situation of its negative (or positive) load. Thus, it helps us explain why one person is distressed by a situation while another is not. Transactional theory proposed that primary and secondary appraisals do not have to follow each other for every situation. Similarly, Ferguson, Matthews and Cox (1999) stated that these “two appraisal processes were not mutually exclusive, but rather interacted to produce an overall percept” (p. 98). This dynamic relationship guides us to examine different stress provoking situations within their unique process.

The relationship between cognitive appraisals and psychological well-being has been studied via different symptoms among within different populations. The rich literature of appraisals provided findings that cognitive appraisals were related

to psychological distress and symptoms including Irritable Bowel Syndrome patients (Ben-Ezra, Hamama-Raz, Palgi, & Palgi, 2015), academic teaching staff (Gomes, Faria, & Gonçalves, 2013), university students (Folkman and Lazarus, 1985), athletes (Nicholls, Perry, & Calmeiro, 2014), Alzheimer's disease caregivers (Morano, 1999), employees (Rafferty & Griffin, 2006), and social workers (Collins, 2015). Another bundle of research showed that threat appraisals are associated positively with higher levels of externalizing behaviors (Zimmer-Gembeck, Lees, Bradley, & Skinner, 2009), depression (Sandler, Kim-Bae, & MacKinnon, 2000) and anxiety (Sheets, Sandler, & West, 1996).

Transactional model suggests that when people experience a stress-provoking event, they initially appraise the situation and choose a coping style to be used in that specific situation (Lazarus, 1991). In this respect, researchers argued that cognitive appraisals and coping styles, thus in turn, psychological symptoms (or adjustment) were significantly related. Pakenham (2001) reported that MS (Multiple Sclerosis) caregivers' adjustment was best predicted by cognitive appraisals. In Alkan's study (2004), appraisals predicted both coping strategies and stress level significantly. For example, challenge appraisal was associated with problem-focused coping whereas threat appraisal was related to emotion-focused coping (Peacock, Wong, & Reker, 1993). Similarly, there was a proposed relationship between secondary appraisals and coping styles. Folkman and Lazarus (1980) argued that uncontrollability appraisal is usually followed by emotion-focused coping, and controllability appraisal is associated with problem-focused coping.

Having either mediating or moderating role of appraisals has been studied in relation to transactional theory of stress. Sha and Xia (2004) studied the mediation effect of cognitive appraisal among university students. One of their major findings

was that appraisals mediated the relationship between stress and negative feelings. Likewise, King (2005) argued that when an event is appraised as vastly significant, it is likely to have more stress reactions. Similarly, cognitive appraisals were found to have a mediating role between stressful life events and reactions to stress (Karademas & Kalantzi-Azizi, 2004). In a study where both mediating and moderating roles of stress, appraisal, and coping was examined, the results showed that appraisal of satisfaction moderated the effects of stress (Morano, 1999).

In the search for how the influence of stressors varies among different individuals, the predicting nature of cognitive appraisals in psychological problems was established by the literature but how these appraisals affect psychological problems was not clearly stated. Therefore, in this study, in line with Lazarus and Folkman's conceptualization of appraisals, the relationship between appraisals and psychological problems is studied by including the factor of "coping".

2.3 Ways of coping and psychological problems

People vary tremendously in how they interpret and react to life events or potential life stressors. A number of different theories that described how individuals interpret and attempt to deal with potential stressors or threats has been proposed (e.g., Bandura, 1989, 1997; Beck, 1976; Beck & Emery, 1985; Endler & Parker, 1990; Freud, 1937; Freud, 1926/1959; Lazarus & Folkman, 1984). Much of this work had a relatively long history, such as research on the concept of "defense" which extended back to the late nineteenth century (Breuer & Freud, 1893/1955). On the other hand, research examining the ways in which people cope with stressful situations has a history spanning only a few decades (Lazarus, 1966; Lazarus & Folkman, 1984). For example, no category of "coping" was included in Psychological Abstracts until 1967 (Poppstone & McPherson, 1988). Substantial developments have occurred in

the study of stress and coping over the past several decades, but much of this research has been detached from the clinical literature.

The first generation of coping research, at the beginning of this century, is represented by psychoanalysis and the concept of psychological defense mechanisms (Freud, 1937; Freud, 1926/1959). The second generation, beginning in the 1960s and evolving through to the present, was strongly identified with the work of Richard Lazarus and the transactional theory of stress (Lazarus, 1966, 1993a; Lazarus & Folkman, 1984). The third generation was associated with recent models of coping theory and research that had emphasized the role of personality variables in coping (Suls & Harvey, 1996).

Although agreeing on the premise that stress has an influence on individual's physical and psychological health, scientists have been taken different perspectives on how this process works. Among other variables studied for the sake of gaining understanding of the process, coping has always been influential. Over the years, the role of coping has been amplified in understanding how stress influences individuals (Suls & Harvey, 1996; Zeidner & Endler, 1996). It has been argued that coping may work as a moderator between stressors and the individual's well-being (Bandura, 1989; Carver, Scheier, & Weintraub, 1989; Lazarus, 1993b; O'Brien & DeLongis, 1996). Different coping mechanisms can either be an obstacle or facilitator in relation to adaptational outcomes. Thus, rather than an objective input (stressor) – output (adaptational outcome) perspective, subjective perceptions and coping strategies of individuals were considered to be significant for the current study.

In defining coping, Lazarus and Folkman (1984) have distinguished between two elementary functions, parallel to two types of coping: Problem-focused coping referred to “the management or alteration of the person–environment relationship

that is the source of stress,” whereas emotion-focused coping referred to “the regulation of stressful emotions” that show up in reaction to the problem (Folkman & Lazarus, 1980, p. 223). Problem-focused strategies aimed at active efforts to reduce the problematic nature of the stressful event. Although problem-focused strategies were frequently intrapersonal or cognitive, social support seeking was placed under this category. In a general sense, this category included planful problem solving, positive reappraisal, accepting responsibility, as well as seeking social support. On the other hand, emotion-focused coping strategies fell into distancing, self-controlling, escape-avoidance, and self-blame. As inferred from the list, not all of them were intended to decrease the negative emotions elicited by the problem. In explaining this phenomenon, Lazarus and Folkman (1984) noted that some people may need to intensify their distress to be able to strive to be occupied with the problem. In other words, some people might make use of negative intensified negative emotions to get motivated to cope with the stressor.

This conceptualization of coping has been supplemented by alternative classifications, including active versus passive coping (Brown & Nicassio, 1987), cognitive versus behavioral coping (Jensen, Turner, Romano, & Strom, 1995), primary-control engagement coping, secondary-control engagement coping and disengagement coping (Compas & Boyer, 2001; Compas et al., 2006)) among others. The first bundle of coping strategies intended to deliberately decrease the amount of distress provoked by the situation. However, the second set of categories differed in their premises. While emotion focused coping served to regulate emotions to better deal with the stressful event, passive coping strategies denoted relying on other people to handle the stressful situation (Zeidner & Endler, 1996).

Research on coping focused on its mediating role between stressful situations and psychological outcomes such as distress, depression, and anxiety (Lazarus & Folkman, 1984; Endler & Parker, 1990). Emotion-focused coping was highly correlated with psychological distress (Ben-Zur, Gilbar, & Lev, 2001; Carver & Scheier, 1994; Zeidner & Endler, 1996), high levels of depression (Li, Seltzer, & Greenberg, 1999), and negative affect (Ben-Zur, 2002; Ntoumanis & Biddle, 1998). For example, Ravindran, Matheson and Griffiths (2002) suggested that increased stress appraisal and use of emotion-focused coping styles were linked to depressive symptoms. These studies also revealed that problem focused coping style was highly associated with low levels of depression (Li et al., 1999) and negative affect (Ben-Zur, 2002).

Some researchers (McPherson, Hale, Richardson, Obholzer, 2003; Diong, & Bishop, 1999) have suggested that in terms of psychological health, active coping strategies are more useful than passive and avoidance based coping strategies. People who used active coping strategies responded more positively to general health questionnaires rather than those who used passive and avoidance-based techniques. Other researchers (Beaton, Murphy, Johnson, Pike, & Cornell, 1999) supported these results by revealing that, regardless of whether they were cognitive or behavioral or escape-avoidance based, coping strategies predicted psychological distress. Another group of researchers found that seeking support and venting were related to higher levels of distress (Clohessy & Ehlers, 1999) but they revealed that escape avoidance strategies were not related to psychological health (Beaton, Murphy, Johnson, Pike, & Cornell, 1999; Clohessy & Ehlers, 1999). These partially inconsistent findings may suggest that the effectiveness of coping strategies is related to the characteristics of the specific stressful situation and the sample studied.

Researches on coping styles in the Turkish population revealed results that corroborated international studies. While active coping styles characterized as self-confident, optimistic and social support seeking were negatively linked with depression; passive coping styles such as self-blaming and submissiveness were positively linked to depression (Muris et al., 2001). Kaya, Genc, Kaya and Pehlivan (2007) worked with a Turkish sample from medical schools and found that students who used passive coping methods had also higher depression scores. In a similar study with nursing students, there was a significant negative relationship between depression and an optimistic approach to coping. A significant positive relationship between coping styles of self-blaming and seeking social support and depression was also presented (Temel, Bahar, & Cuhadar, 2007).

To understand the relationship between stress and psychological problems, several researchers used the concept of “coping” as a mediator and as a moderator between stress, cognitive appraisals and psychological problems. To reveal the role of coping in this relationship, both emotion-focused coping and problem-focused coping variables were studied in line with the conceptualization of Transactional Theory.

2.4 Transactional theory of stress, appraisal, and coping

Ten years of empirical research on stress, coping, and its processes led to the development of a cognitive-relational theory which Lazarus and Folkman called the transactional theory (Lazarus & Folkman, 1987). In order to come up with a metatheory, they studied daily stress, appraisals, and coping as antecedents, mediators, and outcomes due to the complexity of the problem. Transaction, or relationship, could be explained through the interplay of person and environment variables. For instance, challenge required an environment with certain properties

interacting to a specific type of person with particular attributions. In other words, neither a particular environment nor a specific type of personal attributions was sufficiently independent enough to present the challenge appraisal. What made the outcome was their interaction. In studying this interaction, the two key concepts that were claimed to have a mediating role in this process were cognitive appraisals and coping.

Cognitive appraisal is the way in which human beings evaluate what is happening to them from their own perspective. It is important that this view opens room for individual differences through the premise that a person's evaluation is based upon its significance to his or her well-being. Lazarus and Folkman (1987) identified two kinds of appraisals; primary and secondary. Primary appraisal is the one concerned with whether something is related to the person's well-being. Harm refers to something which already happened; threat is the expected harm; and challenge is the anticipated, potential gain. If a person thinks there is no stake, then the encounter becomes irrelevant and none of these primary appraisals arise. Secondary appraisal is explained by how much control and confidence the person thinks he or she has over the situation. Again, if the person thinks the situation is under control, the threat is minimized.

The other intervening concept in the transactional theory is coping. Folkman and Lazarus (1980) approached coping as a process through which the individual changes the problematic person-environment relationship (problem-focused) and manages emotional distress (emotion-focused). These two types of coping are not mutually exclusive categories but rather they are functions of coping which can be understood with regard to specific contexts. In other words, one act of coping might serve as a problem-focused coping in one context and emotion-focused coping in the

other. In contrast to previous conceptualizations, coping was seen as a changeable process; it changes either across situations or as the troubled person-environment relationship progresses.

There have been two different, but not necessarily mutually exclusive, approaches to stress appraisal and coping: trait-oriented and process-oriented (Folkman, Lazarus, Gruen, & DeLongis, 1986). The trait-oriented approach suggests that an individual's personality features rather than the environmental influence define their coping style. Thus, the trait-oriented approach implies a consistency in people's adoption of coping styles. On the other hand, the process-oriented approach, as adopted in the transactional model, proposes that the environment as well as the psychological demands of a specific situation determine the selection of coping styles. Hence, as inferred from this perspective, it is a promising idea that individuals are able to change and adopt more effective coping mechanisms.

The transactional model has proposed a set of relationships between its variables and the paths do not have to follow the same order. First, cognitive appraisals are categorized into two groups and labelled as primary and secondary. This labeling does not imply that one always has to precede the other or one is more important than the other. Instead, the relationship between primary and secondary appraisals is dynamic. In accordance with the secondary appraisal an appropriate coping style follows. When they were first conceptualized, Lazarus and Folkman suggested a sequence of flow from primary to secondary appraisals to coping and eventually, to stress outcomes (Goh, Sawang, & Oei, 2010). Therefore, the major premise of their transactional model was that appraisals and coping mediated the relationship between stressors and the individual's stress outcomes.

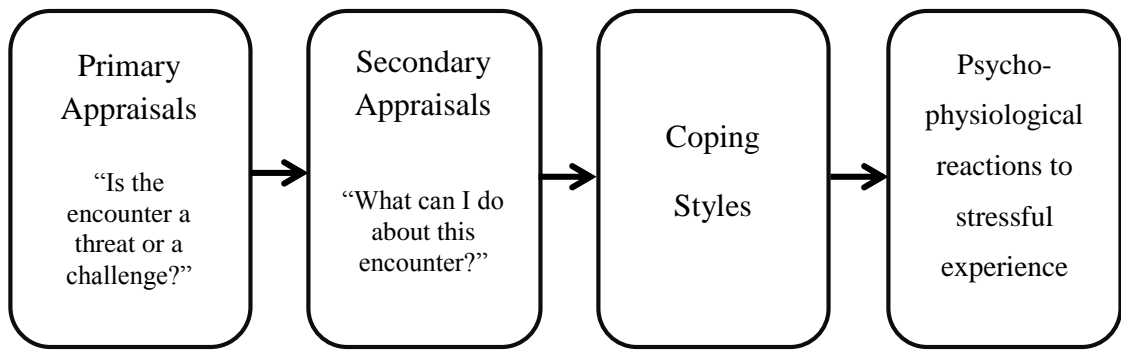


Figure 1. Lazarus and Folkman's (1984) basic model for stress and coping processes when a stressor is encountered (adapted from Goh, Sawang, & Oei, 2010).

Among a great number of studies on the transactional theory of stress, appraisal and coping, some have been supportive of this linear model. Folkman, Lazarus, Dunkel-Schetter, DeLongis, & Gruen (1986) studied the interrelations between stress, appraisals, coping, and outcomes. In terms of primary appraisal and coping relationships, they indicated that in the case of high-threat appraisal, people use more self-control coping, confrontive coping, escape-avoidance and accept more responsibility than in the case of low threat appraisal. In contrast, when threat appraisal is low, people seek more social support. When a loved one's well-being is at stake, people use less planful problem solving and distancing coping styles. Even though the majority of comparisons were not statistically significant, some broad trends were established. Self-control, escape-avoidance, and seeking social support are used when threat is high. Apart from this, positive reappraisal coping style was not found to be associated with any primary appraisal. In terms of the relationships between secondary appraisals and coping, when people appraise a stressful event as changeable, they tend to use more confrontive coping, planful problem solving, positive reappraisal, and accept more responsibility. In a broader sense, people tend to use more problem focused coping styles when they see the encounter as

changeable, and more emotion focused coping when they believe there is a very few options to deal with the situation.

Folkman, Lazarus, Dunkel-Schetter, DeLongis, & Gruen (1986) reported that satisfactory outcomes were associated with higher levels of planful problem solving and positive reappraisal, whereas confrontive coping and distancing were linked to unsatisfactory outcomes of the stressful encounters. In terms of secondary appraisals, higher levels of changeability were related to satisfactory outcomes.

Peacock, Wong, and Reker (1993) studied the relationships between appraisal and coping schemas in relation to the congruence model of effective coping:

In summary, our congruence model has two components: appraisal and coping schemas. Appraisal activates the coping schema relevant to a stressful situation and the schema determines the appropriate coping responses. Because the congruence model is a normative model, it predicts optimal coping when the individual is completely rational and has extensive cultural knowledge. In real life, people sometimes fall short of optimal coping because they may react emotionally without thinking through the problem, or they may respond habitually in a way that is not appropriate for the situation. Nevertheless, it seems reasonable to assume that normal functioning individuals tend to cope in a way that approximates the model. Therefore, we can predict, for a given situation, what type of appraisal and coping are likely to occur. (p. 70)

In testing the first step of the congruence model Peacock, Wong, and Reker (1993) suggested that challenge and controllability appraisals accounted for over 9% of variance in predicting problem focused coping style. As indicated, threat appraisal alone predicted emotion focused coping accounting for 13% of the variance. Although uncontrollability and centrality appraisals had zero-order correlations with emotion focused coping, when threat appraisal was added to the equation, the relationship between them was no longer significant.

The mediating role of coping and collective efficacy in the relationship between stress appraisal and quality of life was studied in a correlational study (Prati, Pietrantonio, & Cicognani, 2011). The quality of life variable was divided into

three categories, two of which were negative (compassion fatigue and burnout) and one positively denoted (compassion satisfaction). It was found that self-blame coping and religious coping mediated the relationship between stress appraisal and burnout among rescue workers. On the other hand, emotion focused, support, self-blame, and self-distraction coping styles mediated the relationship between stress appraisal and compassion fatigue. Lastly, problem-focused and self-blame coping mediated the relationship between stress appraisal and compassion satisfaction. However, denial and cognitive restructuring coping styles were not found to have any mediating role. Overall, mediational analyses indicated that avoidance coping strategies might be seen as dysfunctional while the adaptive influence of problem focused coping strategies was only somewhat supported. From these results, it was concluded that one coping style may have a mediating role between stress appraisal and compassion satisfaction (e.g., problem-focused coping) but not with burnout or compassion fatigue. The researchers quoted from Folkman and Moskowitz (Prati et al., 2011, p.91) in explaining their findings that “a given coping strategy may be effective in one situation but not in another, depending on the controllability of the situation”.

Morano (1999) approached the transactional theory from a relatively different perspective. He studied the relationships between stress, appraisal, and the coping of Hispanic and non-Hispanic caregivers for Alzheimer’s disease (AD) patients. The study aimed to differentiate the mediating and moderating roles of appraisal and coping among AD caregivers. Morano explained his attempts to compare the two models by indicating that caregiver stressors preceded their appraisals or coping did not necessarily mean that the intensity of a stressful event will cause the use a specific coping style. Therefore, “when the model does not specify that specific

coping strategies are used when a given stressor is higher or lower, the model is said to be moderational, not mediational” (Morano, 1999, p. 33).

The results of Morano’s study indicated that appraisal of satisfaction (positive appraisal) moderated the effects of stress on personal gain (positive outcome) accounting for approximately 27% of the variance. On the other hand, appraisal of burden (negative appraisal) mediated the relationship between stressful life experiences and psychological outcomes. The appraisal of burden accounted for approximately 30% of the variance in the somatic symptoms and 32% of the variance in depression. Emotion-focused coping moderated the relationship between stress levels and depression accounting for around 21% of the variance in depression.

Goh et al. (2010) examined a further model of stress in their revised transactional model study. They added one more measurement of psycho-physiological reactions. In other words, instead of measuring stress reactions once in the end, they applied the test before the coping process begins. In their revision of the transactional model, an individual’s reaction to a stressful event (S1) was initiated by both primary and secondary appraisals. This psycho-physiological arousal triggered an individual’s coping mechanisms. Then, according to the success of coping attempts and the first reactions (S1), a new level of psycho-physiological stress outcome (S2) was experienced. In its simplest form, short term reactions (such as increased heart rate and state anxiety) to stress had more to do with cognitive appraisals and long term reactions (such as psychological symptoms and endured illness) had more to do with how the whole process was handled. The results of their study showed that cognitive appraisal can influence an individual’s stress outcome (e.g., negative affectivity, increased heart rate and anxiety).

Not all people experiencing stressful life events and daily hassles react as the same. The psychology literature generally indicates that, rather than a particular environment or a specific type of personal attribution, the interaction of these concepts predicts psychological outcomes more accurately. That's why in the current study, drawing upon the transactional theory of stress, the assumed interplay between how students appraised the stressful situation (daily life hassles and life events that may be triggered by English preparatory year), which coping styles were adopted to deal with the stressors, and on which domains the students reported psychological problems was examined.

CHAPTER 3

METHOD

This section involves information about the participants of the study, instruments used to collect data, design, data collection procedures, and data analysis. The participants section explains the selection processes and the demographic information of the sample. The instrument section describes the scales that were used in the collection of data. The procedures report the different processes of the study and the way in which the scales were administered. Finally, the design and data analyses section presents the design of the study and the statistical methods that were used to answer research questions.

3.1 Participants

The target population was Boğaziçi University English preparatory students from the North, South, and Kilyos campuses. In the 2013-2014 academic year, there were 1596 undergraduate students who registered for English preparatory classes. The accessible population of the study was limited to the students who attended classes during the last three weeks of classes before the English Proficiency Exam, when the data were collected.

The sample of the study was generated by means of convenient sampling method. Graduate students and students from other universities were excluded. The sample of the study consisted of 320 students, around 20% of the target population. For data collection, 320 test packets were distributed on the three campuses. However, 295 of the batteries were handed over to the researcher with a return rate of 92%. Twenty-five of them were dismissed from the study because of missing

responses to the test items. As a result, 270 questionnaires (around 92% of the returned packets) could be analyzed statistically.

Since the participants were between the ages of 18 and 25, no parental consent was needed; instead, their voluntary participation was assured by providing the necessary information about the current study on the informed consent (see Appendix A).

Females made up 54.1 % (146 persons), and males made up 45.9% (124 persons) of the sample. In terms of the participants' place of residence, the majority were living in a dormitory (51.9%), followed by living with their families (28.1%), and living with friends (15.9%). The distribution of the participants according to their sex and place of residence can be seen in Table 1.

Table 1. Distribution of Participants According to Sex and Residence

Characteristics	<i>f</i>	%
Sex		
Female	146	54.1
Male	124	45.9
Total	270	100
Residence		
Dormitory	140	51.9
Family	76	28.1
Friends	43	15.9
Other	6	2.2
Missing	5	1.9
Total	270	100

In terms of age, majority of the participants (64.1%) were 19 and about one fourth of them were 20 years old. The mean age was 19.50 and the standard deviation was 1.14. The age range was between 18 and 28. The distribution of participants' ages can be seen in Table 2.

Table 2. Distribution of Participants According to Age

Age	<i>f</i>	%
18	6	2.2
19	173	64.1
20	68	25.2
21	11	4.1
22	5	1.9
24	2	0.7
25	1	0.4
28	2	0.7
Missing	2	0.7
Total	270	100

The majority of the participants' parents were alive; excluding the missing data 100% of the mothers and 96.6% of the fathers were alive. Eight respondents failed to answer both mother and father questions.

In terms of parents' education level, the most frequent level of education for mothers was primary school (36.5%), which was followed by high school (30.5%) and university (26.5%), respectively. As for fathers, the most frequent level of education was university (46.5%), which was followed by high school (25.3%) and primary school (21.6%), respectively. The participants' parent education levels can be seen in Table 3.

Table 3. Distribution of Participants' Parents Education Level

Education Level	Mother		Father	
	<i>f</i>	%	<i>f</i>	%
Illiterate	7	2.8	2	0.8
Primary School	91	36.5	52	21.6
High School	76	30.5	61	25.3
University	66	26.5	112	46.5
MA/PhD	9	3.6	14	5.8
Missing	21	9.9	29	7.1
Total	270	100	270	100

3.2 Instruments

There were five instruments employed in the study: the Daily Hassles Scale, the Life Events Scale, the Stress Appraisal Measure, the Ways of Coping Questionnaire – Short Form, and the BÜREM Intake Form. To measure indicators of stress, both the Daily Hassles Scale and the Life Events Scale were used because of their unique contributions to the stress literature (DeLongis et al., 1982; Falconier; et al., 2015; Lyon, 2000). Since the BÜREM Intake form contained demographic information about the participants, there was no extra demographic form needed.

The Daily Hassles Scale

To measure the stress of the participants, the Daily Hassles Scale (Cassidy, 2000) was used. There are 18 items in the original scale which indicate the probable stress elements one can experience on daily basis. Participants rate the influence of these events in terms of positivity and negativity on a scale from 1 to 7. Daily hassles of the participants are represented by the total score derived from each answer and higher scores mean higher daily hassles (For sample questions, see Appendix B).

The initial support for the convergent validity can be inferred from correlation analyses. Daily Hassles were significantly correlated with unhealthy behaviors ($r = .81$). As for reliability statistics, the original scale has a Cronbach alpha of 0.97. There was no existing Turkish adaptation of the scale. The translation of the Daily Hassles Scale was done by the thesis advisor and the author of this study. In addition, considering the Preparatory students' daily lives, four items were added to the scale and two items (noise and the weather) were grouped into "environmental conditions". The four new items were "concerns about learning English", "problems about the courses (intensity, difficulty etc.)", "problems about

the teaching staff”, and “to be subject to discrimination”. The Turkish form has 21 items and the possible minimum and maximum scores are 0 and 126, respectively (in data analysis the scoring was recoded from ‘1 to 7’ to ‘0 to 6’).

A pilot study was carried out with 80 Boğaziçi University students (46 females, 34 males) to test whether the translated Daily Hassles and the Life Events scales were easily understood by the students, since the translation was done by the researcher. The Cronbach alpha value was .86 and all of the items appeared to be useful and contributed to the overall reliability of the scale.

In the current study, the results showed that the Cronbach alpha value for the Daily Hassles Scale was .81 and almost all of the items appeared to be useful and contributed to the overall reliability of the scale. The item total correlations ranged from .02 (Item 21; “Having too much time”) and .51 (Item 9 and 14; “Arguments” and “Socializing” respectively). Item 21 might not have been sufficiently clearly worded or valid for the sample of this study. However, since the Cronbach alpha value of the scale went up from .81 to .82 when Item 21 was removed, the item was kept in the analysis.

The Life Events Scale

The second scale which was used to measure the stress factors of the participants was the Life Events Scale. It was adapted to Turkish by Kaymakcioglu (2001) as based upon The Social Readjustment Scale (Holmes & Rahe, 1967) and "The Graduate Stress Inventory" (Rocha-Singh, 1994). The thesis advisor and the author of this study further reorganized the scale in line with the feedback provided by Kaymakcioglu (2001) on her dissertation. The purpose of the reorganization was to obtain an easily understandable version of the Life Events Scale as well as integrating the two layouts into one.

There are 22 items (21 items and one “Other” item) on the scale. First, the respondents needed to indicate whether they had experienced specified life events. Then, if the specific life event had been experienced, the respondents evaluate how much they were affected by that event on a scale from 1 to 7. Marking ‘0’ meant that the specific life event not been experienced (For sample questions, see Appendix C).

There are two possible scorings for the Life Events Scale. In the first one, the number of the items experienced is added up to see how many life events occurred in one’s life. In this scoring, the possible minimum and maximum scores are 0 and 21, respectively (the possible maximum score can be 22 if the respondent marked the “Other” option to write an extra life event). The second scoring type is designed to see the influence of the combined experienced life events. In other words, in the data analysis, the cases where the participant marks ‘0’ are excluded. Then, for the rest of the cases, the participant’s answers on the level of influence are aggregated to obtain the effect of the life events happened in his or her life. In this scoring, the possible minimum and maximum scores are 0 and 126, respectively (in data analysis the scoring was recoded from ‘1 to 7’ to ‘0 to 6’). The possible maximum score can also be 132 if the respondent marks “Other” option and circles “Influenced A Lot”.

As mentioned above, the Life Events Scale can be scored either by calculating the sum of events experienced or the cumulative score of the effects of the events experienced by the participants. In the current study, both scorings were done and the cumulative effect of the life events was chosen due to its power to better predict the outcome variable (psychological problems) (see Table 4).

Table 4. Life Events Scale as a Predictor of Psychological Problems

Life Events Scale	Psychological Problems
Number of Events	.328**
Cumulative Effect of Events	.503**

** $p < .01$ (2 tailed).

In the present study, the Pearson Product Moment correlations were calculated to examine the correlations between daily hassles scores and life events' effect scores. The results indicated that there was a moderate but significant correlation between these two forms ($r = .53, p < .01$). This was interpreted as an indication of the fact that, although they are related, their separate use would be justified and even desirable.

The Stress Appraisal Measure

The Stress Appraisal Measure (SAM) is a widely used tool to assess the primary and secondary cognitive appraisals of both clinical and non-clinical samples. The Stress Appraisal Measure (SAM) is a self-report 24-item Likert type instrument developed by Peacock and Wong (1990). Based on the transactional theory of stress, appraisal and coping, the SAM aims to measure two categories of appraisals: primary and secondary appraisals. Peacock and Wong (1990) conducted three separate studies to establish the psychometric properties of the SAM scale. The factor analysis results revealed that with varimax rotation of factors with eigenvalues greater than one resulted in a six-factor solution. Threat, Challenge, and Centrality constituted the primary appraisals; Controllable, Uncontrollable, and Others-control (i.e. controllable by others) composed secondary appraisals. To establish initial support for the convergent validity, correlation analyses were conducted. Dysphoric mood was significantly correlated with all the subscales of the SAM. In addition,

psychological symptoms were moderately correlated with all but the challenge and controllable-by-self scales.

Internal consistencies of the Threat appraisal ranged from .65 to .75; the Challenge appraisal from .66 to .79; the Centrality appraisal from .84 to .90; the Control appraisal from .84 to .87; the Uncontrollable appraisal from .51 to .82; and the Control by Others appraisal from .84 to .85. In addition, the correlation between the subscales of SAM was 0.2, suggesting that the subscales were related but measured different appraisal dimensions.

The Turkish Form (Durak & Senol-Durak, 2013) is a self-report 24-item tool using a 5-point Likert Scale (“Not at all”, “Slightly”, “Moderately”, “Considerably”, and “Extremely”). Both in the original form and the adaptation, scoring was done by calculating the mean scores for each subscale. By doing that, the researchers obtained comparable scores for each appraisal. Thus, total score of the scale ranges from 0 (minimum score) to 4 (maximum score) and higher scores mean higher appraisal of stress.

The psychometric study of the SAM scale was conducted with 461 university students (228 women, 223 men) aged between 17 and 33 by Durak and Senol-Durak (2013). In terms of subscales (similar to Peacock and Wong, 1990), centrality was loaded within the Threat and Challenge appraisals and thus was diffused into these two sub categories. Two studies were conducted: Study 1 had university student participants aged between 17 and 33, whereas Study 2 had adult participants aged between 20 and 56. Overall, the results indicated that these five factors explained 71.43% of the total variance. There was no difference between male and female participants in terms of factor analysis. Confirmatory factor analysis results for

university students supported that fit index values were sufficient [χ^2 (242, N=751) = 698.525 $p < .001$, RMSEA = .050, SRMR = .059, IFI = .930, TLI = .919, CFI = .929].

To establish initial support for the convergent validity, correlation analyses were conducted. State anxiety correlated significantly with Threat ($r = .40$, $p < .001$), Challenge ($r = -.09$, $p < .05$), Out of Control ($r = .24$, $p < .001$), Control ($r = -.22$, $p < .001$), and Control by others ($r = -.19$, $p < .001$). In addition, discriminant validity analyses showed that Threat ($r = -.15$, $p < .001$), Challenge ($r = .08$, $p < .05$), Out of Control ($r = -.14$, $p < .001$), Control ($r = .16$, $p < .001$), and were significantly correlated with social desirability but Control by Others ($r = .04$, $p = ns$).

Internal consistencies of the scale for both samples of the psychometric studies were calculated (see Table 5).

Table 5. Internal Consistencies (alphas) of SAM scales

Scale	Study 1 <i>N=461</i>	Study 2 <i>N=548</i>
Threat	.81	.83
Challenge	.70	.68
Control	.86	.84
Control by others	.81	.80
Out of control	.74	.74

Sample items for each subscale was; “Will the outcome of this situation be negative?” (Threat), “To what extent can I become a stronger person because of this problem?” (Challenge), “Do I have the ability to do well in this situation?” (Control), “Is it beyond anyone’s power to do anything about this situation?” (Out of Control), and “Is there help available to me for dealing with this problem?” (Control by Others) (For sample questions, see Appendix D).

In the current study, The Cronbach Alpha value for the Stress Appraisal Measure was .80, and the range of item total correlations was from .13 (Item 20) to .62 (Item 8). The Cronbach Alpha values for the subscales were .85, .64, .81, .68, and .83 for Threat, Challenge, Control, Out of Control, and Control by Others subscales, respectively.

The Ways of Coping Questionnaire – Short Form

The Ways of Coping Questionnaire (WCQ) was developed by Susan Folkman and Richard Lazarus in 1980 to assess the coping styles used by individuals when faced with stressful encounters. It is a widely used tool to assess the coping attitudes of both clinical and non-clinical samples. The WCQ was originally composed of 68 items and the response layout was a 4-point Likert scale (0= does not apply/or not used; 1= used somewhat; 2=used quite a bit; 3= used a great deal). Three factor analyses generated eight subscales; Confrontation, Distancing, Self-control, Seeking Social Support, Accept Responsibility (self-blame), Escape/Avoidance, Planful Problem Solving and Positive Reappraisal (Folkman et al., 1986). The target population for this scale was high school age and older. It was suitable for both individual and group administration, taking 10 minutes on average.

For the original questionnaire, the internal consistencies of the subscales were; .70 for Confrontive coping, .61 for Distancing, .70 for Self-controlling, .76 for Seeking Social Support, .66 for Accept Responsibility, .72 Escape-Avoidance, .68 for Planful Problem Solving and finally .79 for Positive Reappraisal. In addition, it was concluded that these eight factors explained 46% of the total variance.

The Turkish form was adapted for Turkish populations by Siva in 1991 from the Ways of Coping Questionnaire (WCQ). For cultural considerations, Siva added eight new items measuring Fate and Supernatural Forces and attained seven factors

from the data analysis. Later, Senol-Durak, Durak, & Elagoz (2011) attempted to test a shortened form of ways of coping questionnaire which was also “universally applicable and culturally sensitive coping measure” (p. 175). The form used in the current study consisted of 31 items on a 5-point Likert scale (0= does not apply/or not used; 1= rarely used 2= somewhat used; 3=used quite a bit; 4= used a great deal). The possible minimum and maximum scores are 0 and 124, respectively.

To study the psychometric properties of the Turkish Short Form of Ways of Coping Questionnaire, Senol-Durak et al. (2011) conducted three studies. The Constructive Study participants consisted of 472 students (295 females and 177 males). The age range was 18 to 29 ($M=21.02$, $SD=1.81$). Both the long and short form were applied to the participants. It was indicated that the short form was composed of seven factors explaining 59% of the total variance. Study 1 participants were 485 Turkish university students (279 females, 206 males). The age range was 17 to 35 ($M=20.92$, $SD=1.89$). In Study 1, together with the demographic information form and the brief version of the WCQ formed in the constructive study, A Beck depression inventory (BDI), the Rosenberg self-esteem scale (RSES) and positive and negative affect scale (PANAS) were administered. The seven-factor model revealed adequate fit, ($\chi^2(413, N = 485) = 654.442, p = 0.000$). Lastly, Study 2 was composed participants were 416 adults (188 females, 208 males) aged between 18 and 75 ($M=34.45$, $SD=1.89$). The same measures were used as in Study 1. In accordance with the results, the seven-factor model revealed adequate fit, ($\chi^2(413, N = 416) = 679.794, p = 0.000$). The seven factors in the Turkish form explained 59% of the total variance (Senol-Durak, Durak, & Elagoz, 2011) (For sample questions, see Appendix E).

The Planful Problem Solving (Scale 1) describes deliberate problem-focused efforts to alter the situation, coupled with a systematic method to solve the problem (e.g. “Thinking of the problem deeply to understand the causes of the problem”).

The Keep to Self (Scale 2) describes efforts to regulate one's feelings and actions (e.g. “Keeping others from knowing what has happened”).

The Seeking Social Support (Scale 3) describes efforts to seek informational support, tangible support, and emotional support (e.g. “Asking a friend for advice before taking a decision”).

The Escape-Avoidance (Scale 4) describes wishful thinking and behavioral efforts to escape or avoid the problem (e.g. “Trying to get away of the problem by delaying the decision”).

The Accept Responsibility (Scale 5) recognizes one's own role in the problem with an associated theme of trying to put things right, also called self-blame (e.g. “Accusing myself as the cause of the problem”).

The Seeking Refuge in Fate (Scale 6) describes efforts to seek relief or give positive meaning by attributions to religious concepts (e.g. “Thinking that ‘every cloud has a silver lining’”).

The Seeking Refuge in Supernatural Forces (Scale 7) describes efforts to seek relief by taking action. These efforts include religious or superstitious rituals (e.g. “Giving money to the poor to get rid of the problem”) or taking a vow.

Internal consistencies of the subscales were calculated for reliability analysis. Alpha levels for each subscale were; Planful Problem Solving ($\alpha = .80$); Keep to Self ($\alpha = .77$); Seeking Social Support ($\alpha = .76$); Escape Avoidance ($\alpha = .65$); Accept Responsibility ($\alpha = .67$); Fate ($\alpha = .80$); Supernatural Forces ($\alpha = .79$) (Senol-Durak, Durak, & Elagoz, 2011).

In the present study, the Cronbach alpha value for the Ways of Coping Questionnaire was .78 and item total correlation ranged from .03 (Item 2; “Talking to someone to find out what to do more about the situation”) to .46 (Item 6, “Giving money to the poor to get rid of the problem”). The Cronbach alpha values for subscales of WCQ were .84, .89, .68, .59, .58, .82, and .99 for Planful Problem Solving, Keep to Self, Seeking Social Support, Escape Avoidance, Accept Responsibility, Refuge in Fate, and Refuge in Supernatural Forces, respectively.

The BÜREM Intake Form

Psychological problems of the participants were measured by the BÜREM Intake Form. It has been continually developed by Albayrak-Kaymak with the contributions of all BÜREM staff since 1993 (D. Albayrak-Kaymak, personal communication, 2015). The form has three parts: Demographic Information and Problem Areas List and short answer questions that are designed to better understand the conditions that bring the students to counseling help. The second part, The Problem Areas List consists of 54 items rated to be on a 4-point Likert Scale. The participants were asked to rate to what degree they were having a problem on each item from “none” (0) to “a lot” (3). Although we gave the entire form to maintain its integrity, only the first two parts of the form were used in this study.

The Problem Areas List has a .91 Cronbach Alpha internal consistency and the subscales’ range from .61 to .90 (Yılmaz-Atmanoglu, Albayrak-Kaymak, & Arman, 2009). The six factors listed below reveal different areas of participants’ psychological distress (For sample questions, see Appendix F).

- Adjustment to University
- Academic Problems
- Relationship Problems

- Emotional State/Depression
- Somatization
- Traumatic Experiences

In terms of concurrent validity, the Problem Areas List had a .85 correlation with the Brief Symptom Inventory (Yılmaz-Atmanoglu, Albayrak-Kaymak, & Arman, 2009). Correlation results showed that the Adjustment to University subscale had the highest correlation with Obsessive-Compulsive subscale ($r = .46, p < .01$); Academic Problems had the highest correlation with the Obsessive-Compulsive subscale ($r = .45, p < .01$); Relationship Problems had the highest correlation with Interpersonal Sensitivity ($r = .50, p < .01$); Emotional State/Depression had the highest correlation with Depression ($r = .81, p < .01$); Somatization had the highest correlation with Somatization ($r = .54, p < .01$); and Traumatic Experiences had the highest correlation with the Anxiety subscale of Brief Symptom Inventory ($r = .36, p < .01$).

In the current study, the Cronbach alpha value for the BÜREM Intake Form was .92 and all items were satisfactory. The item total correlations ranged from .12 (Item 30) to .75 (Item 44). The Cronbach alpha values for the subscales were .89, .75, .67, .71, .77, and .53 for Depression, Academic Problems, Adjustment, Relationship Problems, Somatization, and Traumatic Experiences, respectively.

3.3 Procedures

All necessary permissions to use the measures of the study were granted from both the original authors and translators/adaptors. Full versions of the scales are not given in the Appendix due to copyright concerns. Before the data collection process, permission from the University Ethics Committee (see Appendix G) and English Preparatory Division of The School of Foreign Languages was granted.

Starting from the North Campus, to the South and Kilyos Saritepe Campuses, 320 batteries were distributed to students. In order to avoid order effects, all the batteries were arranged in the following order: Informed Consent, Daily Hassles Scale, Life Events Scale, Stress Appraisal Measure, Ways of Coping Questionnaire, and BÜREM Intake Form. Data was collected during the last three weeks of classes before the English Proficiency Exam so that the students could better consider the stress factors they had. Thus, this consideration might have reflected in the participants' responses as the exam was approaching. The batteries were administered during class hours with the help of the instructors of the English Preparatory Division. The measures took approximately 30 minutes to complete.

It should be noted that the integrity of the BÜREM Intake Form was protected, meaning that, along with demographic information and the problem areas list, open-ended questions were given. This raises an important question: Does keeping the form intact lead to an understanding that psychological support (offered by BÜREM) will follow according to the results of the Intake Form? To avoid such misunderstandings, two steps were taken. First, during the data collection process, the participants were informed by the researcher that the study is aimed to provide helpful insights related to the services of the university. Second, the participants were told that if they felt like they could use some help, there was a page at the end of the booklet containing information about the psychological support services of the university (see Appendix G).

3.4 Design and data analysis

A correlational design was used, as the timetable of the current research did not allow for collection of data across time. The SPSS 17.0 (Statistics Packages of Social Sciences) computer program was used to analyze the data. Based on the levels of

measurement, suitable methods of statistical analyses were used. An α level of .05 was used for all statistical tests. To report reliability values of the Daily Hassles Scale, the Stress Appraisal Measure, the Ways of Coping Questionnaire, and the BÜREM Intake Form, Cronbach alpha values were calculated. Additional analyses related to the research questions were conducted to examine relationships between study variables.

Demographic characteristics of the participants were presented by frequencies, means, standard deviations, maximum and minimum scores, and percentages. Preliminary analyses were calculated by the Pearson Product-Moment correlation, T-test, and ANOVA.

The main statistical technique used to analyze the research questions was multiple regression. To test the first research question, mediation analysis was conducted using multiple regression. Mediation analyses of psychological processes have been widely used due to their utility in finding associations between variables and in their ability to suggest causal (but not definite) mechanisms (MacKinnon, Krull, & Lockwood, 2000; Shrout & Bolger, 2002). To examine the significance of the mediation analyses, confidence intervals (CI) were calculated with a bootstrapping test (MacKinnon, Lockwood, & Williams, 2004).

Figure 2 depicts the model representing the mediation process where X (predictor) affects Y (criterion) and where c is the total effect of the predictor variable on the criterion. Figure 3 demonstrates a simple mediational model where a is the relation of predictor variable to mediator, b is the relation of mediator to criterion variable adjusted for predictor variable and c' is the indirect path where X is anticipated to help predict variability in the mediator M , which in turn is considered to help explain the variability in Y (Iacobucci, 2008).

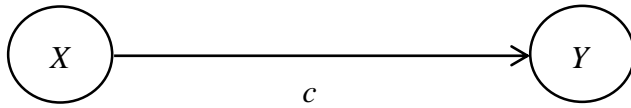


Figure 2. Path Model Showing the Total Effect

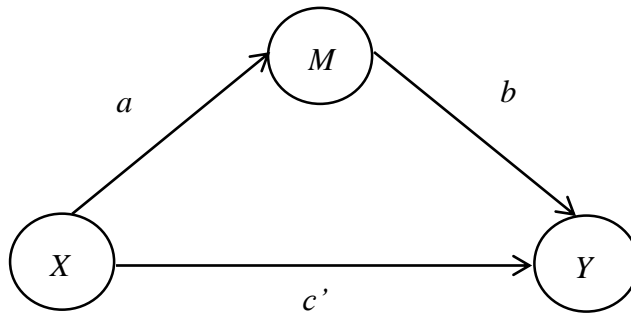


Figure 3. Path Model Showing Simple Mediation

As a precondition to testing a mediational model, the mediator (i.e., ways of coping) must be significantly associated with the outcomes of interest (Criterion 1), predictor variables (i.e., cognitive appraisals) must be significantly associated with the mediator (Criterion 2), and the predictor variables must be associated significantly with the criterion variables which are psychological problems' dimensions in this study (Criterion 3) (Baron & Kenny, 1986). In line with studies of Baron and Kenny (1986) and Judd and Kenny (1981), four steps were used in establishing mediation:

Step 1: Show that the mediator affects the criterion variable.

Step 2: Show that the predictor variables are correlated with the mediator.

Step 3: Show that the predictor variables are correlated with the criterion variable.

Step 4: Evaluate a statistical model of mediation.

In order to answer the 2nd and 3rd research questions, interaction analysis was employed. In a broad sense, interaction occurs when the effect of a predictor variable (X) on a criterion variable (Y) differs across levels of a moderating variable (Z).

Interactions help researchers to better understand the relationships between variables by establishing the conditions under which such relationships apply, or are stronger

or weaker. It should be kept in mind that merely statistically significant interaction effects are not sufficient. It is important to understand and explain moderation effects based on solid theoretical arguments. Figure 4 demonstrates a moderational path.

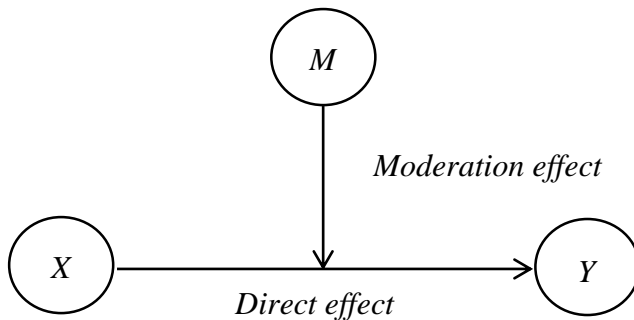


Figure 4. Path Model Showing Simple Moderation

A three-step hierarchical multiple regression analysis was conducted to test interaction effects. In the regression tables, regression coefficients (b), their t statistics, R^2 change, and F change after each step of the regression were summarized. The measure of the contribution of each variable to the model was given by standardized Beta coefficients. A large value indicates that a unit change in this variable has a large effect on the dependent variable. To run a test for moderation, the following steps were followed (Aiken & West, 1991):

Step 1: The X variable is presumed to cause Y.

Step 2: Center the predictor(s) and the moderator variable.

Step 3: Multiply the centered predictor by the centered moderator to create an interaction term.

Step 4: Does the moderator variable alter the strength of the causal relationship?

In the current study, all moderation analyses were conducted in line with the steps mentioned above. In addition, the correlation coefficients of criterion variables and moderator variables were considered. To avoid collinearity issues, correlation coefficients higher than .30 were omitted. To avoid potentially problematic high

multicollinearity with the interaction term, the variables were centered and interaction terms between selected variables were created. It should be noted that, if two or more interaction terms have been created because a variable has more than two levels, all of the interaction terms should be included in the same step (Aiken & West, 1991).

CHAPTER 4

RESULTS

This chapter includes the results of the data analyses with respect to the study variables and the research questions. It starts with the descriptive statistics where general characteristics of the participants, their means, standard deviations, maximum and minimum scores related to the variables were calculated. T-test results were also reported to demonstrate whether there was a significant difference between sexes. In addition, Pearson Correlations for research variables are provided in this chapter. Lastly, results of the mediation and moderation analyses with respect to the research questions are reported.

4.1 Descriptive analysis of variables

The sample of the study consisted of 270 English preparatory students of Boğaziçi University: 146 female (54.1%) and 124 male students (45.9%). Students were between 18 and 28 years with a mean of 19.50 and standard deviation of 1.14 (see Table 2). The majority of them were living in a dormitory (51.9%). About one third were living with their families while a smaller portion were living with friends (15.9%) (see Table 1).

Table 6 shows the means, standard deviations, t-test results for both total sample and two sexes on the Daily Hassles Scale, the Life Events Scale, the Stress Appraisal Measure, the Ways of Coping Questionnaire, and the BÜREM Intake Form as well as their subscales, respectively. The subscales are Threat, Challenge, Control, Out of Control, and Control by Others for SAM; Planful Problem Solving, Keep to Self, Seeking Social Support, Escape/Avoidance, Accept Responsibility (Self-blame), Fate, and Supernatural for WCQ; Depression, Academic Problems,

Adjustment, Relationship Problems, Somatization, and Traumatic Experiences for the BÜREM Intake Form.

According to the results, the mean score of daily hassles was 45.41, where higher scores mean more sense of Daily Hassles. The other predictive of the participants' distress was measured by the Life Events Scale. The mean score of the effects of Life Events was 19.75, where higher scores meant more sense of perceived distress (see Table 6).

The results of the Stress Appraisal Measure showed that the mean score of the Threat subscale was 2.29. As for the Challenge subscale, the mean score was 2.58. In terms of Control subscale, the mean score was 2.67. As for the Out of Control subscale, the mean score was 1.20. In terms of the Control by Others subscale, the mean score was 2.14 (see Table 6).

The results of the Ways of Coping Questionnaire showed that, the mean score of the Planful Problem Solving subscale was 17.57. As for the Keep to Self subscale, the mean score was 7.64. In terms of Seeking Social Support subscale, the mean score was 8.41. As for the Escape/Avoidance subscale, the mean score was 10.30. In terms of Accept Responsibility subscale, the mean score was 7.16. As for the Fate subscale, the mean score was 6.63. In terms of Supernatural subscale, the mean score was 1.86 (see Table 6).

The results of the BÜREM Intake Form used to measure psychological problem areas reported by the participants showed that the mean score of the whole scale was 42.49, and the standard deviation was 19.12. In terms of the Depression subscale, the mean score was 13.56. As for the Academic Problems subscale, the mean score was 11.76. In terms of Adjustment subscale, the mean score was 7.47. As for the Relationship Problems subscale, the mean score was 3.48. In terms of

Somatization subscale, the mean score was 5.56. As for the Traumatic Experiences subscale, the mean score was 0.66 (see Table 6).

Before analyses were conducted for each research question, series of independent-samples t-tests were conducted to compare male and female students' scores on daily hassles, life events, stress appraisals, ways of coping, and psychological problems.

The results showed that there was no significant difference in the scores on Daily Hassles for males ($M=43.58$, $SD=16.83$) and females ($M=46.97$, $SD=16.13$); $t(268) = -1.685$, *ns*. In terms of Life Events scores, the results showed that female students' scores ($M=22.01$, $SD=12.51$) were significantly higher than those of male students ($M=17.09$, $SD=11.98$); $t(266) = -3.724$, $p < .01$.

The results indicated no significant difference between male and female students in terms of the Out of Control and Control by Others sub categories of stress appraisals (see Table 6). A significant difference was found between females and males in terms of the Threat appraisal ($t = -2.714$, $df = 268$, $p < .05$). Females' Threat appraisal scores ($M = 2.41$, $SD = .74$) were higher than males' scores ($M = 2.16$, $SD = .80$). Another significant difference was found between females and males in terms of Challenge ($t = -3.680$, $df = 268$, $p < .05$). Females' Challenge appraisal scores ($M = 2.74$, $SD = .77$) was higher than males' scores ($M = 2.38$, $SD = .82$). Besides, there was a significant difference between females and males' Control appraisal scores ($t = 2.641$, $df = 268$, $p < .05$). Males' Control appraisal scores ($M = 2.79$, $SD = .62$) were higher than females' scores ($M = 2.58$, $SD = .67$).

The results suggested that there was no significant difference between females and males' scores in terms of Planful Problem Solving, Keep to Self, Accept Responsibility, and Supernatural ways of coping (see Table 6). A significant

difference was found between females and males' scores in terms of Seeking Social Support ($t = -3.810$, $df = 268$, $p < .05$). Female students ($M = 9.05$, $SD = 2.90$) used more social support seeking coping than male students ($M = 7.66$, $SD = 3.07$). In addition, there was a significant difference between females and males' scores in terms of Escape/Avoidance ($t = -3.818$, $df = 268$, $p < .05$). Female students ($M = 11.06$, $SD = 3.59$) resorted to more Escape-Avoidance coping than male students ($M = 9.40$, $SD = 3.59$). Furthermore, a significant difference was found between females and males' scores in terms of Fate ($t = -3.228$, $df = 268$, $p < .05$). Female students ($M = 7.38$, $SD = 4.23$) resorted to Fate as a way of coping more than male students ($M = 5.75$, $SD = 4.04$).

The results indicated no significant differences between male and female students in terms of Adjustment to University, Relationship Problems, and Traumatic Experiences (see Table 6). A significant difference was found between females and males in terms of Depression ($t = -2.460$, $df = 268$, $p < .05$). Females ($M = 14.67$, $SD = 8.06$) reported more depression than males ($M = 12.26$, $SD = 7.99$). In addition, there was a significant difference between females and males' scores in terms of Academic Problems ($t = -3.410$, $df = 268$, $p < .05$). Female students ($M = 12.57$, $SD = 4.27$) reported more academic problems than male students ($M = 10.81$, $SD = 4.18$). A significant difference was found between females and males in terms of Somatization ($t = -2.246$, $df = 268$, $p < .05$). Females ($M = 6.03$, $SD = 3.78$) reported more somatization problems than males ($M = 5.00$, $SD = 3.75$). Moreover, there was a significant difference between females and males in terms of overall psychological problems reported by the students ($t = -2.044$, $df = 268$, $p < .05$). Female students ($M = 44.67$, $SD = 18.44$) reported more psychological problems than male students ($M = 33.93$, $SD = 19.65$).

Table 6. Descriptive Statistics and T-Test Results of the Study Variables According to Sex

	Total (N=270)		Male (n=124)		Female (n=146)		
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>t value</i>
Daily Hassles	45.41	16.51	43.58	16.83	46.97	16.12	-1.68
Life Events (No of events)	8.90	3.49	8.28	3.66	9.42	3.26	-2.71*
Life Events	19.75	12.49	17.09	11.98	22.01	12.51	-3.27**
Stress Appraisal Measure							
Threat	2.29	0.78	2.16	0.80	2.41	0.74	-2.71**
Challenge	2.58	0.81	2.38	0.82	2.74	0.77	-3.68***
Control	2.67	0.65	2.78	0.62	2.58	0.67	2.64**
Out of Control	1.20	0.75	1.22	0.73	1.19	0.78	0.34
Control by Others	2.14	0.89	2.12	0.95	2.17	0.8	-0.46
Ways of Coping							
Planful Problem Solving	17.57	3.82	17.85	4.00	2.41	0.74	1.08
Keep to Self	7.64	3.88	7.86	4.15	7.41	3.64	0.95
Seeking Social Support	8.41	3.05	7.66	3.07	9.05	2.90	-3.81***
Escape/Avoidance	10.30	3.65	9.40	3.59	11.06	3.53	-3.82***
Accept Responsibility	7.1	3.64	7.05	3.42	7.25	3.82	-0.44
Fate	6.63	4.22	5.75	4.04	7.38	4.23	-3.23**
Supernatural	1.86	2.33	1.77	2.29	1.94	2.37	-.058
BÜREM Intake Form (Total)	42.49	19.12	39.93	19.65	44.67	18.44	-2.04*
Depression	13.56	8.11	12.26	8.00	14.67	8.07	-2.46**
Academic Problems	11.76	4.31	10.8	4.18	12.57	4.27	-3.41**
Adjustment	7.47	4.36	7.48	4.38	7.46	4.35	0.05
Relationship Problems	3.48	3.15	3.64	3.54	3.34	2.77	0.75
Somatization	5.56	3.80	5.00	3.75	6.03	3.78	-2.25*
Traumatic Experiences	0.66	1.36	0.74	1.57	0.60	1.16	0.88

* $p < .05$, ** $p < .01$, *** $p < .001$

To identify the most commonly experienced daily hassles and life events; the most commonly adopted cognitive appraisals and ways of coping; the most commonly reported and psychological problem areas, each scale score was recalculated with its subscales. New mean scores were generated by calculating the average scores on each subscale in order to obtain comparable scores.

The results indicated that (1) concerns about learning English, (2) problems about the courses (intensity, difficulty etc.), (3) travelling (to work, shops etc.) were

the most commonly reported daily hassles of the English preparatory students, ($M = 3.46$, $SD = 1.83$; $M = 3.26$, $SD = 1.65$; $M = 3.26$, $SD = 2.02$, respectively). In terms of sex, there was no difference in the order of the most commonly reported items. In terms of life events experienced by the participants, the most commonly reported events were (1) societal problems in Turkey or around the world, (2) excessive expectations and responsibilities, (3) death (of a parent, sibling, close friend, pet etc.) ($M = 3.07$, $SD = 1.69$; $M = 2.93$, $SD = 1.77$; $M = 2.65$, $SD = 1.81$, respectively). The first two life events remained the same for females and males; however, the third most commonly reported life event differed. For females, “death (of a parent, sibling, close friend, pet etc.)” was the life event experienced most commonly in the third place, whereas for males it was “health problems of a family member”.

According to the results, participants adopted (1) Control and (2) Challenge appraisals the most, ($M = 2.67$, $SD = .65$; $M = 2.57$, $SD = .81$, respectively). Although the most commonly embraced cognitive appraisal was “Control” among the whole population, females reported (1) Challenge and (2) Control ($M = 2.74$, $SD = .77$; $M = 2.58$, $SD = .67$, respectively). Male participants adopted (1) Control and (2) Challenge appraisals the most, ($M = 2.78$, $SD = .62$; $M = 2.38$, $SD = .82$, respectively).

Out of seven different ways of coping, three of the most commonly used were (1) Planful Problem Solving, (2) Seeking Social Support, and (3) Escape Avoidance ($M = 2.93$, $SD = .63$; $M = 2.10$, $SD = .76$; $M = 2.06$, $SD = .73$, respectively). For females the most commonly used ways of coping were (1) Planful Problem Solving, (2) Seeking Social Support, and (3) Escape Avoidance ($M = 2.89$, $SD = .61$; $M = 2.27$, $SD = .72$; $M = 2.22$, $SD = .70$, respectively). For males however, the order was different. Male participants utilized the most (1) Planful Problem Solving, (2) Keep

to Self, and (3) Seeking Social Support ($M = 2.98$, $SD = .66$; $M = 1.96$, $SD = 1.04$; $M = 1.91$, $SD = .77$, respectively).

According to the results obtained from the BÜREM Intake Form Problem Areas List, the most commonly reported areas of psychological problems were from (1) Academic Problems, (2) Relationship Problems, and (3) Depression ($M = 1.47$, $SD = .54$; $M = .93$, $SD = .63$; $M = .90$, $SD = .54$, respectively). In terms of sex, there was no difference in the order of the most commonly reported areas of psychological problems. Both females and males reported suffering most from academic problems, relationship problems, and depression. However, females reported more problems than males in all these three problem areas, and somatization.

Finally, bivariate correlations of the variables tested in the research questions were calculated. Table 7 summarized the results of the Pearson correlations of the research variables.

Table 7. Pearson Correlations for Research Variables

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Daily Hassles	1														
2. Life Events	.53**	1													
3. Threat	.24**	.28**	1												
4. Challenge	-.04	-.01	.40**	1											
5. Control	-.18**	-.13*	-.12*	.37**	1										
6. Out of Control	.32**	.22**	.49**	.02	-.27**	1									
7. Control by Others	-.13*	-.08	.00	.29**	.42**	-.15*	1								
8. PPS	-.11	-.04	.08	.31**	.40**	-.07	.13*	1							
9. KS	.16**	.14**	.06	-.10	-.08	.10	-.09	.14*	1						
10. SSS	.01	.04	.10	.23**	.12*	.01	.25**	.25**	-.26**	1					
11. EA	.06	.09	.08	.02	-.10	.03	.01	.03	.09	.12	1				
12. AR	.21**	.25**	.26**	-.11	-.27**	.26**	-.04	-.16**	.23**	.02	.21**	1			
13. RF	-.04	.01	.09	.18**	.07	.00	.18**	.05	.10	.23**	.04	.06	1		
14. RSF	.04	.05	.10	.07	-.00	.10	.08	-.04	.11	.17**	.20**	.14*	.44**	1	
15. Psychological problems	.49**	.50**	.32**	-.09	-.26**	.29**	-.14*	-.21**	.14*	.01	.12*	.39**	-.05	.01	1

Note: PPS (Planful Problem Solving), KS (Keep to Self), SSS (Seeking Social Support), EA (Escape Avoidance), AR (Accept Responsibility), RF (Refuge in Fate), RSF (Refuge in Supernatural Forces) are seven ways of coping. Threat, Challenge, Control, Out of Control, and Control by Others are the cognitive appraisals.

* $p < .05$, ** $p < .01$, *** $p < .001$.

4.2 Results according to research questions

Several multiple regression analyses were conducted to test the main hypotheses of the current study. For mediation analyses, criteria suggested by Baron and Kenny (1986) were tested and a series of regression analyses were conducted. For moderation analyses, a three-step hierarchical regression analysis was done to test each model. These analyses were not conducted separately for males and females due to the small number of participants.

Q.1. Do Ways of Coping Mediate the Relationship between Cognitive Appraisals and Psychological Problems?

The aim of the first research question was to investigate the mediating role of ways of coping on the relations between cognitive appraisals and psychological problems of English preparatory year students. In order to test mediational models, a series of regression analyses was used. Each mediational model is demonstrated below.

Step 1: Ways of coping as predictors of psychological problems.

The first regression equation involved determining the level of direct relationship between the different ways of coping in the study (Planful Problem Solving, Keep to Self, Seeking Social Support, Escape Avoidance, Accept Responsibility, Fate, and Supernatural Forces) and psychological problems experienced by students. It was expected that the ways of coping variables would be significant predictors of students' psychological problems.

The results indicated that Planful Problem Solving made a significant contribution in predicting 4% (adjusted R^2) of students' psychological problems, $\beta = -.21$, $F(1,268) = 12.35$, $p < .01$.

Keep to Self, as the second way of coping in the study, made a significant contribution in predicting 2% (adjusted R^2) of students' psychological problems, $\beta = .14$, $F(1,268) = 5.32$, $p < .05$.

Seeking Social Support made no significant contribution to predicting psychological problems $\beta = .007$, $F(1,268) = .014$, $p > .05$.

Escape/Avoidance, as the fourth way of coping in the study, made a significant contribution in predicting 1% (adjusted R^2) of students' psychological problems, $\beta = .12$, $F(1,268) = 3.88$, $p < .05$.

Accept Responsibility (self-blame) made a significant contribution in predicting 15% (adjusted R^2) of students' psychological problems, $\beta = .39$, $F(1,268) = 47.17$, $p < .001$.

Fate and Supernatural forces made no significant contribution to predicting psychological problems $\beta = -.05$, $F(1,268) = .73$, $p > .05$; $\beta = .012$, $F(1,268) = .036$, $p > .05$, respectively.

In accordance with the results, three ways of coping (Seeking Social Support, Fate, and Supernatural Forces) were excluded from further analyses because they made no significant contribution to predicting students' psychological problems. Planful Problem Solving, Keep to Self, Escape Avoidance, and Accept Responsibility were further analyzed due to their significant relationships with the psychological problems.

Step 2: Cognitive appraisals as predictors of ways of coping.

The second regression equation involved determining the level of direct relationship between the cognitive appraisals (Threat, Challenge, Control, Out of Control, and Control by Others) and different ways of coping in the study (Planful Problem Solving, Keep to Self, Seeking Social Support, Escape Avoidance, Accept

Responsibility, Fate, and Supernatural Forces). It was expected that the cognitive appraisals would be significant predictors of ways of coping. Each way of coping was analyzed separately.

In order to see whether cognitive appraisals had an effect on Planful Problem Solving regression analyses were conducted. Threat and Out of Control appraisals made no significant contribution to predicting Planful Problem Solving $\beta = .08$, $F(1,268) = 1.86$, $p > .05$; $\beta = -.07$, $F(1,268) = 1.19$, $p > .05$, respectively. Challenge appraisal accounted for 9% (adjusted R^2) of the variance in Planful Problem Solving, $F(1,268) = 29.05$, $p < .001$. Student appraisal of challenge was significantly associated with Planful Problem Solving ($\beta = .31$, $p < .001$). Control appraisal accounted for 16% (adjusted R^2) of the variance in Planful Problem Solving, $F(1,268) = 50.24$, $p < .001$. Student appraisal of control was significantly associated with Planful Problem Solving ($\beta = .40$, $p < .001$). The Control by Others appraisal accounted for 1% (adjusted R^2) of the variance in Planful Problem Solving, $F(1,268) = 4.75$, $p < .05$. Student appraisal of Control by Others was significantly associated with Planful Problem Solving ($\beta = .13$, $p < .05$).

In order to see whether cognitive appraisals had an effect on Keep to Self, a regression analysis was conducted. Threat, Challenge, Control, Out of Control, and Control by Others appraisals made no significant contribution to predicting Keep to Self coping style, $\beta = .06$, $F(1,268) = 1.06$, $p > .05$; $\beta = -.97$, $F(1,268) = 2.52$, $p > .05$; $\beta = -.08$, $F(1,268) = 1.68$, $p > .05$; $\beta = .10$, $F(1,268) = 2.91$, $p > .05$; $\beta = -.09$, $F(1,268) = 2.33$, $p > .05$, respectively. Therefore, Keep to Self was excluded from further analysis.

In order to see whether cognitive appraisals had an effect on Escape Avoidance, regression analysis was conducted. Threat, Challenge, Control, Out of

Control, and Control by Others appraisals made no significant contribution to predicting the Escape Avoidance coping style $\beta = .08$, $F(1,268) = 1.97$, $p > .05$; $\beta = .02$, $F(1,268) = .16$, $p > .05$; $\beta = -.10$, $F(1,268) = 2.98$, $p > .05$; $\beta = .03$, $F(1,268) = .19$, $p > .05$; $\beta = .007$, $F(1,268) = .01$, $p > .05$. Therefore, Escape Avoidance was excluded from further analysis.

Since Seeking Social Support, Fate, and Supernatural Forces had been excluded from further analysis, Accept Responsibility was the last way of coping to be analyzed in this step. In order to see whether cognitive appraisals had an effect on Accept Responsibility, regression analysis was conducted. Threat appraisal accounted for 6% (adjusted R^2) of the variance in Accept Responsibility, $F(1,268) = 19.50$, $p < .001$. Student appraisal of threat was significantly associated with Accept Responsibility ($\beta = .26$, $p < .001$). Challenge and Control by Others appraisals made no significant contribution to predicting the Accept Responsibility coping style $\beta = -.11$, $F(1,268) = 3.24$, $p > .05$; $\beta = -.04$, $F(1,268) = .45$, $p > .05$. Control appraisal accounted for 7% (adjusted R^2) of the variance in Accept Responsibility, $F(1,268) = 21.13$, $p < .001$. Student appraisal of control was significantly associated with Accept Responsibility ($\beta = -.27$, $p < .001$). The Out of Control appraisal accounted for 7% (adjusted R^2) of the variance in Accept Responsibility, $F(1,268) = 20.22$, $p < .001$. Student appraisal of Out of Control was significantly associated with Accept Responsibility ($\beta = .27$, $p < .001$).

Step 3: Cognitive appraisals as predictors of psychological problems.

In order to see whether cognitive appraisals had an effect on psychological problems, regression analyses were conducted. The Threat appraisal accounted for 10% (adjusted R^2) of the variance in psychological problems, $F(1,268) = 29.90$, $p < .001$.

Student appraisal of threat was significantly associated with psychological problems ($\beta = .32, p < .001$).

The Challenge appraisal made no significant contribution to predict psychological problems $\beta = -.09, F(1,268) = 2.04, p > .05$. The Control appraisal accounted for 6% (adjusted R^2) of the variance in psychological problems, $F(1,268) = 18.89, p < .001$. Student appraisal of control was significantly associated with psychological problems ($\beta = -.26, p < .001$). The Out of Control appraisal accounted for 8% (adjusted R^2) of the variance in psychological problems, $F(1,268) = 24.88, p < .001$. Student appraisal of out of control was significantly associated with psychological problems ($\beta = .29, p < .001$). Lastly, the Control by Others appraisal accounted for 2% (adjusted R^2) of the variance in psychological problems, $F(1,268) = 5.03, p < .05$. Student appraisal of control by others was significantly associated with psychological problems ($\beta = -.14, p < .05$).

Step 4: Ways of coping as mediators.

The criteria demonstrated above gave the opportunity to test the mediational models: (a) Ways of coping as predictors of psychological problems, (b) Cognitive appraisals as predictors of ways of coping, and (c) Cognitive appraisals as predictors of psychological problems. In step 4 the mediational models were to be tested by regression analyses.

In line with the results, the five mediational models (1) Planful Problem Solving as a mediator between Control appraisal and psychological problems (2) Planful Problem Solving as a mediator between Control by Others appraisal and psychological problems (3) Accept Responsibility as a mediator between Threat appraisal and psychological problems (4) Accept Responsibility as a mediator between Control appraisal and psychological problems (5) Accept Responsibility as

a mediator between Out of Control appraisal and psychological problems, are summarized in Figure 5.

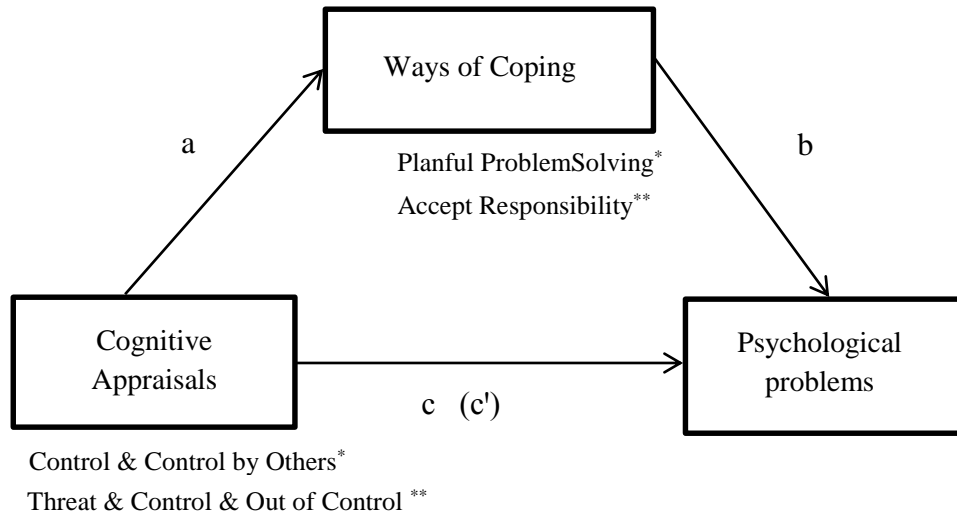


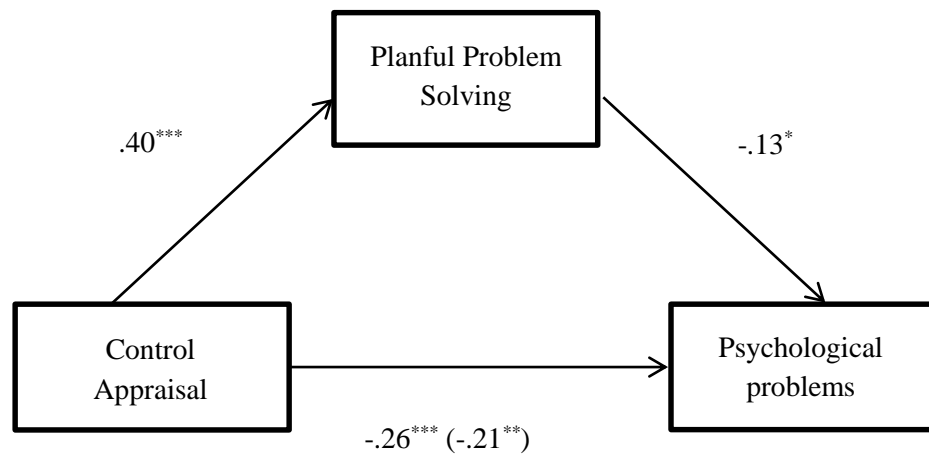
Figure 5. Summary of the Mediation Models Tested

* Planful problem solving as a mediator, ** Accept Responsibility as a mediator.

Mediation Model 1: Planful Problem Solving as a mediator between Control appraisal and psychological problems.

Regression analysis was used to investigate the mediating role of Planful Problem Solving on the relationship between Control appraisal and psychological problems. Results indicated that Control was a significant predictor of Planful Problem Solving, $b = 2.32$, $SE = .33$, $\beta = .40$, $p < .001$, and that Planful Problem Solving was a significant predictor of psychological problems, $b = -.64$, $SE = .32$, $\beta = -.13$, $p < .05$. Control appraisal was still a significant predictor of psychological problems scores, $b = -6.01$, $SE = 1.87$, $\beta = -.21$, $p < .01$. Approximately 8% of the variance in satisfaction was accounted for by the predictors ($R^2 = .08$). After controlling for the mediator, to see whether the decrease in the effect of Control appraisal on psychological problems was significant, the indirect effect was tested using a bootstrap estimation approach with 5000 samples (Preacher & Hayes, 2008). These

results indicated the indirect coefficient was significant, $b = -1.50$, $SE = .77$, 95% CI = $-3.194, -.166$, supporting for partial mediation (see Figure 6, Meditational Model).



* $p < .05$, ** $p < .01$, *** $p < .001$.

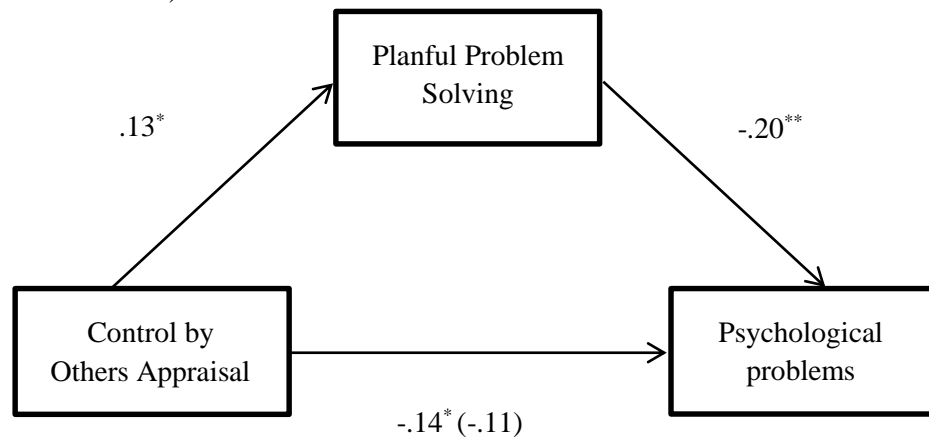
Figure 6. Standardized regression coefficients for the relationship between Control and psychological problems as partially mediated by Planful Problem Solving.

Meditational Model 2: Planful Problem Solving as a mediator between Control by Others appraisal and psychological problems.

Regression analysis was used to investigate the mediating role of Planful Problem Solving on the relationship between the Control by Others appraisal and psychological problems. Results indicated that Control by Others was a significant predictor of Planful Problem Solving, $b = .57$, $SE = .26$, $\beta = .13$, $p < .05$, and that Planful Problem Solving was a significant predictor of psychological problems, $b = -.98$, $SE = .30$, $\beta = -.20$, $p < .01$. The Control by Others appraisal was no longer a significant predictor of psychological problems scores when controlling for the mediator, $b = -2.37$, $SE = 1.30$, $\beta = -.11$, ns, consistent with full mediation.

Approximately 6% of the variance in satisfaction was accounted for by the predictors ($R^2 = .06$). The indirect effect was tested using a bootstrap estimation approach with 5000 samples (Preacher & Hayes, 2008). These results indicated the indirect

coefficient was significant, $b = -.56$, $SE = .33$, 95% CI = -1.345, -.041 (see Figure 7, Mediation Model).



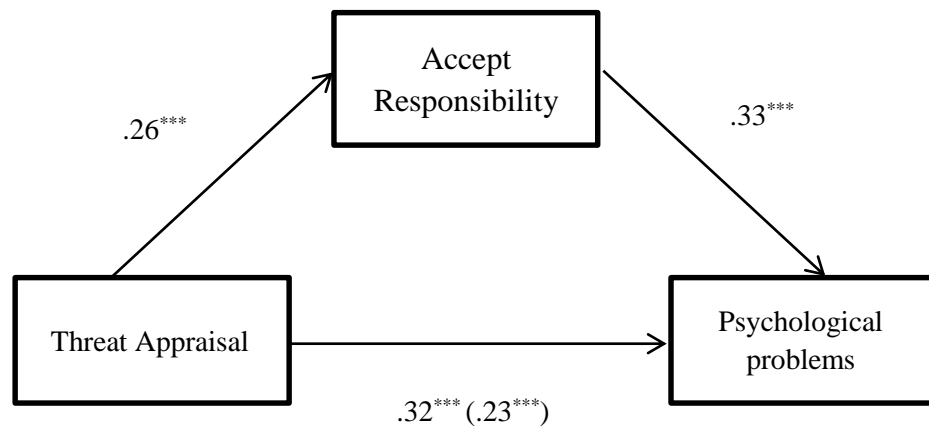
* $p < .05$, ** $p < .01$, *** $p < .001$.

Figure 7. Standardized regression coefficients for the relationship between Control by Others and psychological problems as mediated by Planful Problem Solving.

Mediation Model 3: Accept Responsibility as a mediator between Threat appraisal and psychological problems.

Regression analysis was used to investigate the mediating role of Accept Responsibility on the relationship between Threat appraisal and psychological problems. Results indicated that Threat was a significant predictor of Accept Responsibility, $b = 1.22$, $SE = .28$, $\beta = .26$, $p < .001$, and that Accept Responsibility was a significant predictor of psychological problems, $b = 1.71$, $SE = .30$, $\beta = .33$, $p < .001$. Threat appraisal was still a significant predictor of psychological problems scores when controlling for the mediator, $b = 5.69$, $SE = 1.39$, $\beta = .23$, $p < .001$. Approximately 20% of the variance in satisfaction was accounted for by the predictors ($R^2 = .20$). After controlling for the mediator, to see whether the decrease in the effect of Threat appraisal on psychological problems was significant, the indirect effect was tested using a bootstrap estimation approach with 5000 samples (Preacher & Hayes, 2008). These results indicated the indirect coefficient was

significant, $b = 2.09$, $SE = .63$, 95% CI = 1.033, 3.515, supporting for partial mediation (see Figure 8, Mediation Model).



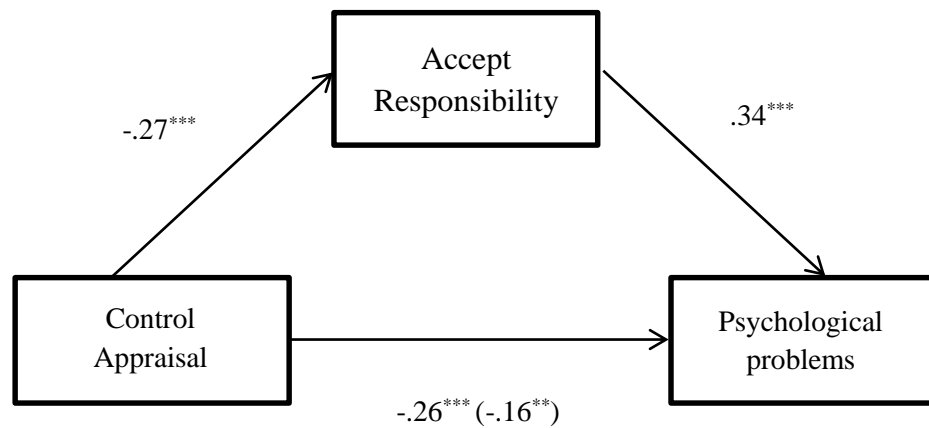
* $p < .05$, ** $p < .01$, *** $p < .001$.

Figure 8. Standardized regression coefficients for the relationship between Threat and psychological problems as mediated by Accept Responsibility.

Mediation Model 4: Accept Responsibility as a mediator between Control appraisal and psychological problems.

Regression analysis was used to investigate the mediating role of Accept Responsibility on the relationship between the Control appraisal and psychological problems. Results indicated that Control was a significant predictor of Accept Responsibility, $b = -1.50$, $SE = .33$, $\beta = -.27$, $p < .001$, and that Accept Responsibility was a significant predictor of psychological problems, $b = 1.80$, $SE = .30$, $\beta = .34$, $p < .001$. The Control appraisal was still a significant predictor of psychological problems scores when controlling for the mediator, $b = -4.79$, $SE = 1.69$, $\beta = -.16$, $p < .01$. Approximately 17% of the variance in satisfaction was accounted for by the predictors ($R^2 = .17$). After controlling for the mediator, to see whether the decrease in the effect of Control appraisal on psychological problems was significant, the indirect effect was tested using a bootstrap estimation approach with 5000 samples (Preacher & Hayes, 2008). These results indicated the indirect coefficient was

significant, $b = -2.72$, $SE = .82$, 95% CI = -4.627, -1.373, supporting for partial mediation (see Figure 9, Mediation Model).



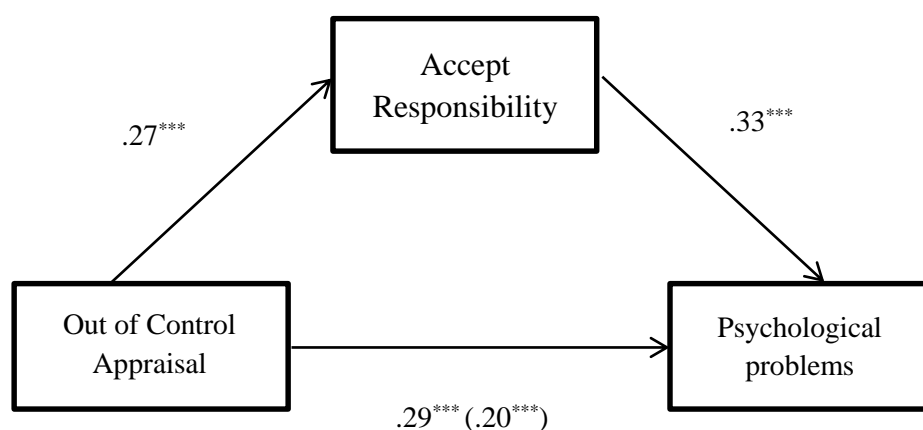
* $p < .05$, ** $p < .01$, *** $p < .001$.

Figure 9. Standardized regression coefficients for the relationship between Control and psychological problems as partially mediated by Accept Responsibility.

Mediation Model 5: Accept Responsibility as a mediator between Out of Control appraisal and psychological problems.

Regression analysis was used to investigate the mediating role of Accept Responsibility on the relationship between the Out of Control appraisal and psychological problems. Results indicated that Out of Control was a significant predictor of Accept Responsibility, $b = 1.28$, $SE = .28$, $\beta = .27$, $p < .001$, and that Accept Responsibility was a significant predictor of psychological problems, $b = 1.75$, $SE = .30$, $\beta = .33$, $p < .001$. The Out of Control appraisal was still a significant predictor of psychological problems scores when controlling for the mediator, $b = 5.15$, $SE = 1.45$, $\beta = .20$, $p < .001$. Approximately 19% of the variance in satisfaction was accounted for by the predictors ($R^2 = .19$). After controlling for the mediator, to see whether the decrease in the effect of the Out of Control appraisal on psychological problems was significant, the indirect effect was tested using a bootstrap estimation approach with 5000 samples (Preacher & Hayes, 2008). These

results indicated the indirect coefficient was significant, $b = 2.22$, $SE = .67$, 95% CI = 1.107, 3.809, supporting for partial mediation (see Figure 10, Mediation Model).



* $p < .05$, ** $p < .01$, *** $p < .001$.

Figure 10. Standardized regression coefficients for the relationship between Out of Control and psychological problems as partially mediated by Accept Responsibility.

Q.2.1. Do Different Types of Cognitive Appraisals Moderate Relationship between Daily Hassles and Psychological Problems?

To test the hypothesis that cognitive appraisals moderate the relationship between daily hassles and psychological problems, a hierarchical multiple regression analysis was conducted. Multicollinearity diagnostics were assessed and were within an acceptable range (VIF ranges from 1.15 to 1.74). See Table 7 for correlations among variables. Variables that were predicted to have problematically high multicollinearity were centered (i.e., Daily hassles and SAM subscales; Aiken & West, 1991).

In the first model, Daily Hassles accounted for a significant amount of variance in psychological problems scores, $F(1,268) = 86.55$, $p < .001$. Daily Hassles accounted for 24% of the total variance (see Table 8).

In the second model, subscales of cognitive appraisals were entered. Daily Hassles remained as a significant predictor of psychological problems, $b = .47$, t

(263) = 7.49, $p = .000$. Together with the Daily Hassles only Threat scores, $b = 6.38$, $t(263) = 3.89$, $p = .000$, and Challenge scores, $b = -3.29$, $t(263) = -2.20$, $p = .028$ were significant predictors of psychological problems. The second model accounted for a significant amount of variance in psychological problems scores, $F(6,263) = 20.93$, $p < .001$, and accounted for 32% of the total variance (see Table 8).

In the final step of the regression analysis, out of five interaction terms Daily Hassles x Threat was the only significant one, $b = .19$, $t(262) = 2.81$, $p = .005$, and the model accounted for 34% of the variance in psychological problems scores (see Table 8).

Table 8. Hierarchical Multiple Regression Analysis Summary of Daily Hassles, Subscales of Cognitive Appraisals, and Daily Hassles x Threat Appraisal Predicting Psychological Problems (N = 270)

Variable	<i>B</i>	<i>SEB</i>	<i>B</i>	<i>R</i> ²	<i>F</i> for Change in <i>R</i> ²
Step 1				.24	86.55***
Daily Hassles	.57	.06	.49***		
Step 2				.32	6.15***
Daily Hassles (DH)	.47	.06	.41***		
Threat	6.38	1.64	.26***		
Challenge	-3.29	1.49	-.14*		
Control	-2.83	1.81	-.10		
Out of Control	.24	1.58	.01		
Control by Others	.02	1.23	.00		
Step 3				.34	7.91**
Daily Hassles (DH)	.46	.06	.40***		
Threat	6.08	1.62	.25***		
Challenge	-2.85	1.48	-.12		
Control	-2.82	1.79	-.10		
Out of Control	.10	1.55	.00		
Control by Others	-.17	1.22	-.01		
DH x Threat	.19	.07	.14**		

Note: All the predictor variables were centered at their means.

* $p < .05$, ** $p < .01$, *** $p < .001$.

A multiple regression model was tested to investigate whether the association between Daily Hassles and psychological problems depends on the level of Threat appraisal. After centering Daily Hassles and threat appraisals and computing the daily hassles-by-threat interaction term (Aiken & West, 1991), the two predictors and the interaction were entered into a simultaneous regression model. Results indicated that greater daily hassles ($b = .46$, $SE_b = .06$, $\beta = .40$, $p < .001$) and higher Threat appraisal ($b = 6.08$, $SE_b = 1.62$, $\beta = .25$, $p < .001$) were both associated with higher psychological problems.

The interaction between Daily Hassles and Threat appraisal was also significant ($b = .19$, $SE_b = .07$, $\beta = .14$, $p < .01$), suggesting that the effect of daily hassles on psychological problems depended on the level of threat perceived by the students. Simple slopes for the association between Daily Hassles and psychological problems were tested for low (-1 SD below the mean) and high ($+1$ SD above the mean) levels of Threat. Each of the simple slope tests revealed a significant positive association between daily hassles and psychological problems, but the daily hassles were more strongly related to psychological problems for high levels of Threat appraisal ($b = .67$, $SE_b = .08$, $p < .001$) than for lower levels ($b = .33$, $SE_b = .08$, $p < .001$) of threat appraisal. Figure 11 plots the simple slopes for the interaction.

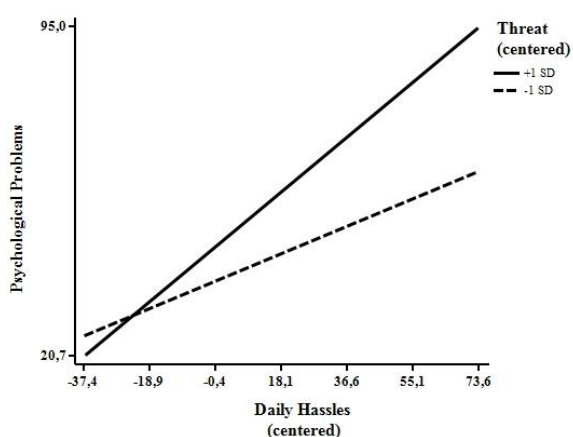


Figure 11. Simple slopes of Daily Hassles predicting psychological problems for 1 SD below and 1 SD above the mean of Threat appraisal.

Q.2.2. Do Different Types of Cognitive Appraisals Moderate the Relationship between Life Events and Psychological Problems?

To test the hypothesis whether cognitive appraisals moderate the relationship between Life Events and psychological problems, a hierarchical multiple regression analysis was conducted. Multicollinearity diagnostics were assessed and were found to be within an acceptable range (VIF ranges from 1.11 to 1.86). See Table 7 for correlations among variables. Variables that were predicted to have multicollinearity were centered (i.e., Life events and SAM subscales; Aiken & West, 1991).

In the first step, Life Events accounted for a significant amount of variance in psychological problems scores, $F(1,266) = 89.94, p < .001$. Life Events accounted for 25% of the total variance in the first model (see Table 9).

In the second model, subscales of cognitive appraisals were entered. Life Events remained as a significant predictor of psychological problems, $b = .63, t(261) = 7.74, p = .000$. Together with the Life Events only Threat scores, $b = 4.83, t(263) = 3.89, p = .004$ were significant predictors of psychological problems. The second model accounted for a significant amount of variance in psychological problems scores, $F(6,261) = 21.66, p < .001$, and accounted for 33% of the total variance (see Table 9).

In the final step of the regression analysis, five interaction terms between Life Events scores and cognitive appraisal subscale scores were created, but only Life Events x Control had a significant contribution to the regression model, $b = -.35, t(260) = -2.52, p = .012$ (see Table 9). The final model accounted for 35% of the variance in psychological problems scores.

Table 9. Hierarchical Multiple Regression Analysis Summary of Life Events, Subscales of Cognitive Appraisals, and Life Events x Control Appraisal Predicting Psychological Problems (N = 270)

Variable	<i>B</i>	<i>SE B</i>	<i>B</i>	<i>R</i> ²	<i>F</i> for Change in <i>R</i> ²
Step 1				.25	89.94***
Life Events (LE)	.77	.08	.50***		
Step 2				.33	6.24***
Life Events (LE)	.63	.08	.42***		
Threat	4.83	1.67	.20**		
Challenge	-2.50	1.50	-.11		
Control	-3.16	1.81	-.11		
Out of Control	1.85	1.53	.07		
Control by Others	-.54	1.23	-.03		
Step 3				.35	6.32*
Life Events (LE)	.60	.08	.40***		
Threat	5.17	1.66	.21**		
Challenge	-2.61	1.49	-.11		
Control	-2.81	1.80	-.10		
Out of Control	1.45	1.52	.06		
Control by Others	-.81	1.22	-.04		
LE x Control	-.27	.11	-.13*		

Note: All the predictor variables were centered at their means.

* $p < .05$, ** $p < .01$, *** $p < .001$.

A multiple regression model was tested to investigate whether the association between Life Events and psychological problems depends on the level of Control appraisal. After centering the Life Events and Control appraisals and computing the life events-by-control interaction term (Aiken & West, 1991), the two predictors and the interaction were entered into a simultaneous regression model. Results indicated that greater life events ($b = .60$, $SE_b = .08$, $\beta = .40$, $p < .001$) were associated with higher psychological problems.

The interaction between the Life Events and Control appraisal was also significant ($b = -.27$, $SE_b = .11$, $\beta = -.13$, $p < .05$), suggesting that the effect of life events on psychological problems depended on the level of control appraised by the students. Simple slopes for the association between Life Events and psychological problems were tested for low (-1 SD below the mean) and high ($+1$ SD above the mean) levels of Control. Each of the simple slope tests revealed a significant positive association between Life Events and psychological problems, but the life events were more strongly related to psychological problems for lower levels of Control appraisal ($b = .87$, $SE_b = .10$, $p < .001$) than for higher levels ($b = .53$, $SE_b = .11$, $p < .001$) of Control appraisal. Figure 12 plots the simple slopes for the interaction.

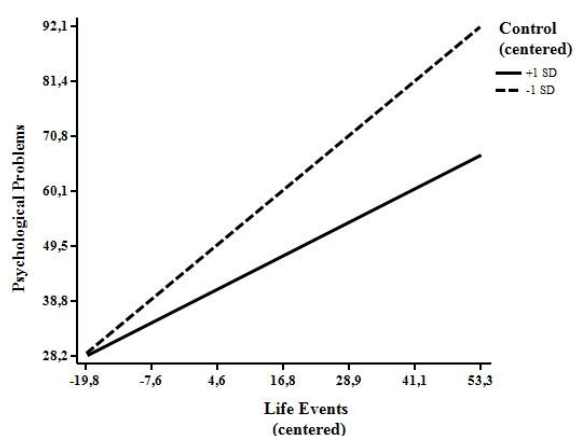


Figure 12. Simple slopes of Life Events predicting psychological problems for 1 SD below and 1 SD above the mean of Control appraisal.

Q.3.1. Do Different Ways of Coping on the Relationship between Daily Hassles and Psychological Problems?

To test the hypothesis whether ways of coping moderate the relationship between Daily Hassles and psychological problems, a hierarchical multiple regression analysis was conducted. Multicollinearity diagnostics were assessed and were within an acceptable range (VIF ranges from 1.09 to 1.38). See Table 7 for correlations

among variables. Variables that were predicted to have problematically high multicollinearity were centered (i.e., Daily hassles and WCQ subscales; Aiken & West, 1991).

In the first step, Daily Hassles accounted for a significant amount of variance in psychological problems scores, $F(1,268) = 86.55, p < .001$. Daily Hassles accounted for 24% of the total variance (see Table 10).

In the second model, subscales of ways of coping were entered. Daily Hassles remained as a significant predictor of psychological problems, $b = .48, t(261) = 7.88, p = .000$. Together with the Daily Hassles only Planful Problem Solving scores, $b = -.75, t(261) = -2.71, p = .007$, and Accept Responsibility scores, $b = 1.37, t(261) = 4.78, p = .000$ were significant predictors of psychological problems. The second model accounted for a significant amount of variance in psychological problems scores, $F(8,261) = 17.58, p < .001$, and accounted for 35% of the total variance (see Table 10).

In the final step of the regression analysis, seven interaction terms between Daily Hassles scores and ways of coping subscale scores were created and only Daily Hassles x Accept Responsibility had a significant contribution to the regression model, $b = .04, t(260) = 2.54, p = .012$. The final model accounted for 37% of the variance in psychological problems scores (see Table 10).

Table 10. Hierarchical Multiple Regression Analysis Summary of Daily Hassles, Subscales of Ways of Coping, and Daily Hassles x Accept Responsibility Predicting Psychological Problems (N = 270)

Variable	<i>B</i>	<i>SEB</i>	β	<i>R</i> ²	<i>F</i> for Change in <i>R</i> ²
Step 1				.24	86.55***
Daily Hassles (DH)	.57	.06	.49***		
Step 2				.35	6.08***
Daily Hassles (DH)	.48	.06	.41***		
PPS	-.75	.28	-.15**		
KS	.28	.28	.06		
SSS	.41	.36	.07		
EA	.23	.27	.04		
AR	1.37	.29	.26***		
RF	-.20	.26	-.04		
RSF	-.45	.47	-.06		
Step 3				.37	6.46*
Daily Hassles (DH)	.44	.06	.38***		
PPS	-.77	.27	-.16**		
KS	.28	.28	.06		
SSS	.43	.36	.07		
EA	.31	.27	.06		
AR	1.36	.28	.26***		
RF	-.16	.26	-.04		
RSF	-.54	.47	-.07		
DH x AR	.04	.01	.13*		

Note: All the predictor variables were centered at their means. PPS (Planful Problem Solving), KS (Keep to Self), SSS (Seeking Social Support), EA (Escape Avoidance), AR (Accept Responsibility), RF (Refuge in Fate), RSF (Refuge in Supernatural Forces).

* $p < .05$, ** $p < .01$, *** $p < .001$.

A multiple regression model was tested to investigate whether the association between Daily Hassles and psychological problems depends on the level of Accept Responsibility coping. After centering Daily Hassles and Accept Responsibility and computing the daily hassles-by- accept responsibility interaction term (Aiken &

West, 1991), the two predictors and the interaction were entered into a simultaneous regression model.

Results indicated that greater Daily Hassles ($b = .44$, $SE_b = .06$, $\beta = .38$, $p < .001$) and higher Accept Responsibility ($b = 1.36$, $SE_b = .28$, $\beta = .26$, $p < .001$) were both associated with higher psychological problems. The interaction between Daily Hassles and Accept Responsibility was also significant ($b = .04$, $SE_b = .01$, $\beta = .13$, $p < .05$), suggesting that the effect of daily hassles on psychological problems depended on the level of Accept Responsibility coping adopted by the students. Simple slopes for the association between Daily Hassles and psychological problems were tested for low (-1 SD below the mean) and high ($+1$ SD above the mean) levels of Accept Responsibility. Each of the simple slope tests revealed a significant positive association between Daily Hassles and psychological problems, but the Daily Hassles were more strongly related to psychological problems for high levels of Accept Responsibility ($b = .59$, $SE_b = .07$, $p < .001$) than for lower levels ($b = .36$, $SE_b = .09$, $p < .001$) of Accept Responsibility. Figure 13 plots the simple slopes for the interaction.

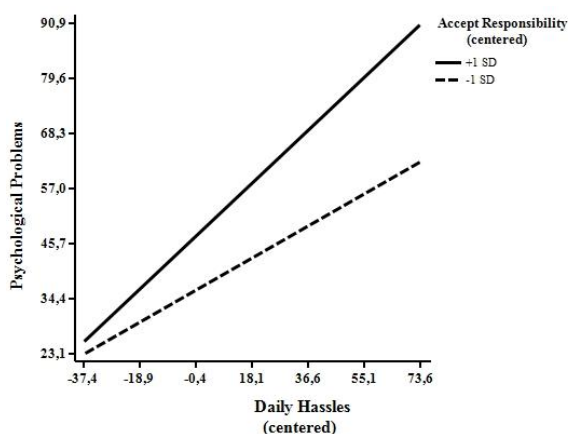


Figure 13. Simple slopes of Daily Hassles predicting psychological problems for 1 SD below and 1 SD above the mean of Accept Responsibility.

Q.3.2. Do Different Ways of Coping Moderate the Relationship between Life Events and Psychological Problems?

To test the hypothesis whether ways of coping moderate the relationship between Life Events and psychological problems, hierarchical multiple regression analysis was conducted. Multicollinearity diagnostics were assessed and were within an acceptable range (VIF ranges from 1.08 to 1.39). See Table 7 for correlations among variables. Variables that were predicted to have problematically high multicollinearity were centered (i.e., Life events and WCQ subscales; Aiken & West, 1991).

In the first step, Life Events accounted for a significant amount of variance in psychological problems scores, $F(1,266) = 89.94, p < .001$. Life Events accounted for 25% of the total variance (see Table 11).

In the second model, subscales of ways of coping were entered. Life Events remained a significant predictor of psychological problems, $b = .65, t(259) = 8.18, p = .000$. Together with Life Events, only Planful Problem Solving scores, $b = -.91, t(259) = -3.31, p = .001$, and Accept Responsibility scores, $b = 1.22, t(259) = 4.22, p = .000$ were significant predictors of psychological problems. The second model accounted for a significant amount of variance in psychological problems scores, $F(8,259) = 17.93, p < .001$, and accounted for 36% of the total variance (see Table 11).

In the final step of the regression analysis, seven interaction terms between Life Events scores and ways of coping subscale scores were created, which accounted for 37% of the variance in psychological problems scores. None of the seven interaction terms had a significant contribution to the regression model (see

Table 11). In other words, ways of coping did not moderate the relationship between life events and psychological problems.

Table 11. Hierarchical Multiple Regression Analysis Summary of Life Events, Subscales of Ways of Coping, and Life Events x Subscales of Ways of Coping Predicting Psychological Problems (N = 270)

Variable	<i>B</i>	<i>SEB</i>	β	R^2	<i>F</i> for Change in R^2
Step 1				.25	89.94***
Life Events (LE)	.77	.08	.42***		
Step 2				.36	5.97***
Life Events (LE)	.65	.08	.42***		
PPS	-.91	.28	-.18**		
KS	.38	.28	.08		
SSS	.45	.36	.07		
EA	.16	.28	.03		
AR	1.22	.29	.23***		
RF	-.29	.26	-.06		
RSF	-.43	.47	-.05		
Step 3				.37	.76
Life Events (LE)	.60	.09	.39***		
PPS	-.97	.28	-.19**		
KS	.41	.28	.08		
SSS	.54	.37	.09		
EA	.23	.28	.04		
AR	1.10	.30	.21		
RF	-.28	.26	-.06		
RSF	-.47	.48	-.06		
LE x PPS	-.02	.02	-.04		
LE x KS	-.01	.02	-.02		
LE x SSS	.03	.03	.06		
LE x EA	-.03	.02	-.08		
LE x AR	.03	.02	.09		
LE x RF	-.01	.02	-.02		
LE x RSF	.01	.03	.03		

Note: All the predictor variables were centered at their means. PPS (Planful Problem Solving), KS (Keep to Self), SSS (Seeking Social Support), EA (Escape Avoidance), AR (Accept Responsibility), RF (Refuge in Fate), RSF (Refuge in Supernatural Forces).

* $p < .05$, ** $p < .01$, *** $p < .001$.

CHAPTER 5

DISCUSSION

This chapter starts with a summary of the current study with the review of the major findings of the study. The general discussion reviews the characteristics of the sample and the findings from preliminary analyses. The results of the study with respect to related literature are then discussed in the same order in which they were presented in the previous section. Following that, implications of the study, limitations of the study, and recommendations for future research and practice are presented.

5.1 General discussion

The secondary aim of the present study was to see which stressors were dominantly experienced, what the general distributions were of cognitive appraisal of the stressful situations and ways of coping adopted, and what psychological problem areas were reported by the English preparatory students. As a dominant factor influencing individual psychosocial characteristics, gender differences in terms of these variables were investigated.

To provide insight into the nature of stressful experiences of Boğaziçi University English preparatory students, two indicators of stress (Daily Hassles and Life Events) were used. According to the results, the most commonly experienced daily hassles by both males and females were (1) concerns about learning English, (2) problems with the courses (intensity, difficulty etc.), (3) travelling (to work, shops etc.). The results were consistent with the students' conditions considering the time of the data collection and the city of Istanbul. Data collection took place during the last three weeks of courses, close to the English Proficiency Exam date. Thus,

concerns about English and problems with the courses would expect to preoccupy students' daily lives. When the location of three campuses and the extremely long hours of travel in Istanbul were taken into account, it was no surprise that travelling was identified as the third major daily stressor. In a similar study with university students in Turkey, financial problems, homesickness, future anxiety, difficulties related to study habits, and bad eating habits were found to be common (Türküm, Kızıldaş, & Sarıyer, 2004).

The second indicator of stress in the current study was life events. The most commonly reported events were (1) societal problems in our country or around the world, (2) excessive expectations and responsibilities, (3) death (of a parent, sibling, close friend, pet etc.) for females and (3) health problems of a family member for males.

Starting from May 2013, Turkey —and Istanbul in particular — experienced major sociopolitical upheavals. Raised awareness about global warming is more common among educated people. And among them are university students who are inclined to take activist roles in conservation of nature, green and trees. Policies, however, result in loss of already-limited green areas. May 2013 was the beginning of Gezi Park protests which was ignited by the municipality's recreation project. Along with Gezi Park protests, and during the year prior to the data collection, bribery and corruption operations were carried out on several government authorities, car bombs killed 52 people in Reyhanlı, near the Syrian border, the Turkish government banned the sale of alcohol in shops between 22:00 and 06:00 and barred access to social media platforms (on and off for about a year), 301 people died in the Soma mine accident, and the government started a major investigation against people whom they considered involved in what was labelled "parallel state".

The most commonly reported life event among the participants, societal problems in our country or around the world may be interpreted in this context.

The second most reported life event, excessive expectations and responsibilities, is best understood through the lenses of students. After succeeding in the marathon of high school entrance exams, the students were placed in top schools such as the well-known Anatolian high schools or science high schools. A typical Boğaziçi University student who had graduated from such high-standard schools next faced the challenging marathon of preparations for the university entrance exam. After high school and university entrance exams, the pressure and deadlines of the English Proficiency Exam might have contributed to the order and effect of this life event. The students of Boğaziçi University typically are the top students who have a high achiever profile and now they have to compete with other high achievers. Moreover, knowing that getting into Boğaziçi University is a remarkable success (the majority of the programs enroll students from top 1%), the families and social environments of the students expect them to be at top 1% all the time, not only in the academic domain but also in other domains. Professor Deniz Albayrak-Kaymak, who is also the chair of the student counseling services at Boğaziçi University, explained that “Once an achiever in academic domain, you lose your freedom to lose, loosen in other domains of your life. Not only your parents, but nearly everyone in your near or far environments build such high expectations that you feel ashamed if they are not met. Therefore, what you might have naturally accomplished with joy in the past turns into a burden in your future vision.” (personal communication, 2015).

Lastly, concerning the traumatizing nature of death and major health problems, it may be easier to grasp why the death of a parent, sibling, close friend, or

a pet for females and health problems of a family member for males ranked third in the list of life events. One of the most commonly used measures of life events, the Social Readjustment Rating Scale (Holmes & Rahe, 1967) suggests that each life event on the list has a preassigned score indicating the magnitude of the event's possible impact on the individuals. The range of the magnitude changes from 11 (minor violations of the law) to 100 (death of a spouse). Related to the life events scale used in the current study, the death of close family member (63) and change in the health of family member (44) have relatively high significance.

Another study result showed that both female and male students resorted to the Planful Problem Solving coping style the most. Savcı and Aysan (2014) also reported that the use of the Planful Problem Solving coping strategy was high among Turkish university students. High levels of problem-focused coping and lower levels of emotion-focused coping were reported in a research by Carver et al. (1989) in an American student sample. This finding is consistent with another finding of the current study that the students mostly appraised Control and Challenge when faced with a stressful situation. Since Planful Problem Solving demands dealing actively with a stressful situation, considering oneself in control and challenged rather than threatened would contribute to the utilization of this coping style. Similarly, Moos and Schaefer (1993) argued that "approach coping processes should be most effective in situations that are appraised as changeable and controllable... an individual's coping style needs to fit the situation" (p. 251). In addition, while female students were adopting Seeking Social Support, male students were using the Keep to Self coping style as the second most frequently used style. Also, female students reported significantly more use of Seeking Social Support than male students. This finding may be regarded in congruence with traditional gender roles in Turkey.

Significant difference between females' and males' life events scores are consistent with prior research (Lazarus & Folkman, 1984; Rahe, 1979), where female participants reported higher effects of experienced life events than males. This result may be interpreted in two ways: either females were affected by significantly more major life events than males or females were inclined to share personal information more explicitly and easily than males.

It is generally acknowledged that sex differences in the adoption of coping styles are compatible with gender role stereotypes. While some studies reported gender differences in coping styles (Carver et al., 1989; Savcı & Aysan, 2014), others found no gender differences (Valentier, Holahan, & Moos, 1994; Smith, 1989). In the current study, the results indicated significant differences in Seeking Social Support, Escape Avoidance, and Fate as coping styles, showing that female students adopted these three ways of coping significantly more than male students. In contrast to Savcı and Aysan's (2014) study, no significant sex differences were found on Planful Problem Solving and Accept Responsibility scores.

In terms of psychological problems, female students suffered significantly more from depression, academic problems, and somatization than males. These findings contradicted the outcomes Yılmaz-Atmanoglu, Albayrak-Kaymak, and Arman's (2009) study on the comparison of psychological problem areas between clinical and non-clinical populations of Boğaziçi University students. They reported that there was only one significant difference between females and males in terms of problem area: academic problems. According to their outcomes, male students reported more academic problems than female students. It should be noted that the sample of the current study was composed of solely English preparatory students,

whereas Yılmaz-Atmanoglu, Albayrak-Kaymak, and Arman's (2009) study gathered data from all undergraduate students.

Bivariate correlations which were used as a source of validity evidence for the scales we used also provided some information that was in line with the expected framework of the study. Psychological problems were positively correlated with Daily Hassles, Life Events, the appraisals of Threat and Out of Control, Accept Responsibility (self-blame), Keep to Self and Escape-Avoidance coping while they were negatively correlated with the appraisals of Control and Control by Others, and Planful Problem Solving coping. All of these results were consistent with previous studies (Cassidy & Burnside, 1996; Durak, 2007; Kessler, 1997; Lazarus & Folkman, 1984; Lu, 1991). One interesting finding inconsistent with previous studies was the relationship between Seeking Social Support and psychological problems. Similar to Williams' study (2000) with college students, neither regression analyses nor correlations revealed a significant relationship between social support and psychological problems and their sub-categories. Either the Seeking Social Support subscale was inadequate to measure what it purported to measure, or there was something intrinsic to the study sample. One possible explanation may be related to the competitive atmosphere of Boğaziçi University, so that the students who sought help might have not received sufficient support to deal with their stressors. Another issue to be considered here is that the English Preparatory students were in a transition period. Most of them (70%) were living in dormitories or with new friends, apart from their family-based support systems. The first year at the university may not be the best time to see the expected advantages of Seeking Social Support coping as their friendship support systems are yet to develop. Through the 2nd and 3rd years, friendships get stronger and seeking social support may become functional.

The results were as expected in terms of the correlations among Daily Hassles, Life Events, and psychological problems. The correlation coefficients of Daily Hassles were higher than those of life events in Depression, Academic Problems, Adjustment, and Relationship Problems. Somatization problems were more related to Life Events than Daily Hassles in general. Lastly, there was no significant relationship between Daily Hassles and Traumatic Experiences (as symptoms of psychological health), whereas effects of Life Events were significantly correlated with Traumatic Experiences. Adolescent studies on stress and symptomatology (Seiffge-Krenke, 2000) indicated that the relationship between daily hassles and symptomatology was more considerable than that between major events and symptomatology. Considering the mean age (19.50) of the current study, the findings may point out that the effects of the major life events are more observable after adolescence.

According to Zeidner and Saklofske (as cited in Ben-Zur, Yagil, & Oz, 2005), effective coping styles reside efforts to eliminate the effects of the stressor, decrease psychological distress, preserve social functioning, and retain a sense of well-being. Overall results of the relationships between different ways of coping and psychological problems indicated that Planful Problem Solving was negatively correlated with psychological problems, whereas Keep to Self, Escape Avoidance, and Accept Responsibility were positively correlated. Seeking Social Support, Fate, and Refuge in Supernatural Forces did not significantly correlate with psychological problems. The results indicated that only the problem-focused coping contributed to decreased psychological problems (Morano, 1999; Muris et al., 2001). In addition, the maladaptive nature of avoidance as a coping strategy is consistent with previous studies (Littleton, Horsley, John, & Nelson, 2007; Prati et al., 2011; Seiffge-Krenke,

2000). Similarly, as the use of Accept Responsibility coping increased, psychological problems appeared to increase (Morano, 1999; Muris et al., 2001). Ultimately, the relatively more powerful relationships between Planful Problem Solving, Accept Responsibility and psychological problems needed further investigation.

5.2 Conclusions based on the research questions

The purpose of this study was to clarify the impact of daily and major events in the psychological stress process and the possible roles of cognitive appraisals and ways of coping in regulating the relatively effects of these stressors. Based on the transactional model of stress presented by Lazarus and Folkman (1984), several analyses were conducted which considered the direct relationships of the study variables, as well as mediation and moderation effects.

Q.1. Do Ways of Coping Mediate the Relationship between Cognitive Appraisals and Psychological Problems?

The aim of the first research question was to investigate the mediating role of ways of coping on the relations between cognitive appraisals and psychological problems. The model was tested through a series of regression analyses based upon Baron and Kenny's (1986) recommendations for establishing mediation. The criteria used for mediation analysis resulted in five separate mediational models to be explored. The results showed that all five mediational models were significant, one being a full mediation and the others being partial mediations. Before explaining the mediation analysis results, it should be noted that no firm conclusions about causal path can be made concerning the nature of the study, which was relational.

Each way of coping was tested for mediational analysis based on Baron and Kenny's (1986) steps. The results revealed that only Planful Problem Solving fully mediated the relationship between the Control by Others appraisal and psychological problems. This implies that Planful Problem Solving served as a filter through which Control by Others (i.e. appraised social support) passed. In other words, this finding indicates that the Control by Others appraisal becomes irrelevant if a student adopts Planful Problem Solving. Regardless of having available recourses that help to deal with stressors, students will report less psychological problems if Planful Problem Solving their dominant way of coping. Peer (2011) reported a similar result indicating the partial mediating role of coping on the relationship between social support and stress. It was also found that Planful Problem Solving partially mediated the relationship between Control appraisal and psychological problems. This indicates that Planful Problem Solving served as a filter through which Control appraisal passed. In other words, Control appraisal becomes less relevant if a student adopts Planful Problem Solving as a way of coping.

Coping strategies can be either functional or dysfunctional, or similarly categorized as adaptive versus maladaptive (O'Connor, Rasmussen, & Hawton, 2010). Seeking social support, parental support, and problem-focused coping styles are conceptualized as functional coping strategies. Dysfunctional coping strategies usually include escape avoidance, wishful thinking, and self-blame (Carver, Scheier & Weintraub, 1989). Lazarus and Folkman (1984) claimed that long-term psychological well-being is associated with the use of problem-focused coping strategies. Based upon this knowledge, it is reasonable to assert that regardless of the students' anticipation of available resources to deal with the stressors, Planful

Problem Solving approach would help them keep their psychological well-being intact in the long-term. Our findings were supportive of this assertion.

In addition to the current study's major finding, regression analyses revealed a partial mediating role of Accept Responsibility (Self-blame) on the relationship between cognitive appraisals (Threat, Control, and Out of Control) and psychological problems. This indicates that Accept Responsibility served as a filter through which Threat/Control/Out of Control appraisals passed. In other words, these three appraisals become less relevant if a student adopts Accept Responsibility as a way of coping. Self-blame may indeed be activated as they perceive themselves not doing what they could, or what they could do to keep things under control.

There is evidence that Accept Responsibility mediated the relation between stress appraisal and quality of life (Prati, et al., 2011). People who adopt Accept Responsibility as a way of coping often accuses themselves of being faulty or responsible, which usually results in negative emotions such as anger (Lazarus & Folkman, 1984). Here, blame (an affectively negative state) differs from perceived responsibility (which might be an emotionally neutral or positive condition). Thus, the individual may think through the situation over and over again to have done something different to change the outcome. An individual who appraises a stressful situation as controllable is usually expected to utilize Planful Problem Solving to deal with the situation. However, in this case, the interplay between Control appraisal and Accept Responsibility shows an important result that the use of Accept Responsibility coping may supersede the relatively positive influence of Control appraisal. This interplay may be explained through the assumption that when individuals interpret a stressful situation as controllable by themselves and adopt Accept Responsibility, this would end up with more self-accusation than perceiving

the situation as uncontrollable. Thus, in long term Accept Responsibility, which seems to be ineffective, may contribute to psychological distress.

Q.2.1. Do Different Types of Cognitive Appraisals Moderate Relationship between Daily Hassles and Psychological Problems?

This question tested the moderating effect of cognitive appraisals on the relationship between daily hassles and psychological problems. The effect of Daily Hassles on psychological problems was moderated only by Threat appraisal. Daily Hassles were more strongly related to psychological problems for high levels of Threat appraisal than low levels of Threat appraisal. In other words, when students appraised a stressful situation as a threat to their well-being, it was more likely for them to reveal psychological symptoms.

According to Hudek-Knežević and Kardum (2000), Threat appraisal increases the use of emotion-focused and avoidance coping strategies, whereas Controllability appraisal has a significant effect only on problem-focused coping. Students who appraised the stressful period as more threatening may have suffered from negative emotions and in return adopted avoidance as a way of coping. Thus, high levels perceived Threat may constitute a risk factor in student psychological well-being.

Q.2.2. Do Different Types of Cognitive Appraisals Moderate the Relationship between Life Events and Psychological Problems?

This question tested the moderating effect of cognitive appraisals on the relationship between life events and psychological problems. The effect of Life Events on psychological problems was only moderated by Control appraisal. Thus Life Events were more strongly related to psychological problems for low levels of Control

appraisal than high levels of Control appraisal. In other words, when a student appraised a stressful situation as controllable, it was less likely for him/her to reveal psychological symptoms.

Secondary appraisals (Control, Out of Control, and Control by Others) are in a way related to an individual's perceptions of coping resources. For instance, when an individual evaluates a stressful event as controllable by others, s/he is likely to seek social support. Similarly, Control appraisal is related to an individual's sense of confidence in his or her capabilities to deal with the stressor. In the present study, in accordance with the assumptions of transactional theory, higher levels of Control appraisal predicted less psychological problems than lower levels of control.

Q.3.1. Do Different Ways of Coping on the Relationship between Daily Hassles and Psychological Problems?

When we tested the moderating effect of ways of coping on the relationship between daily hassles and psychological problems, we found that the effect of Daily Hassles on psychological problems was only moderated by Accept Responsibility (self-blame). Daily Hassles were more strongly associated with psychological problems for high levels of Accept Responsibility than low levels of Accept Responsibility. In other words, when a student adopted Accept Responsibility as a way of dealing with a stressful situation, it was more likely for him/her to reveal psychological symptoms.

In accordance with the results of the current study, Morano (1999) argued that Accept Responsibility did moderate the relationship between Daily Hassles and psychological problems. McCrae and Costa (1986) concluded that seeking support and rational action as well as expression of emotions, turning to religion, and humor were appraised to be the most effective, while wishful thinking, self-blame,

indecisiveness, isolation of affect, and passivity were reflected the least effective.

The significant interaction of Accept Responsibility coping and Daily Hassles was established by the data. Hence, Accept Responsibility as a way of dealing with daily hassles seems to be ineffective in the case of English preparatory students.

Lazarus (1999) argued that one's internalized cultural upbringing forms the way the person handles social environment which directly affects one's coping behaviors. In many Western cultures, the emphasis on individuality and independence constitutes an understanding of self that "individual behavior is organized and made meaningful primarily by reference to one's own internal repertoire of thoughts, feelings, and action" (Markus & Kitayama, 1991, p. 226). However, in many Asian cultures interdependency (relatedness) is a valued characteristic. According to Markus and Kitayama (1991) interdependent selves are prone to express emotions such as sympathy and shame. In addition, in collectivist cultures self-control and self-restraint are important in that they enhance social adjustment.

Although a great number of research (Ryan & Deci, 2000) argued that autonomy and relatedness are two opposite concepts on a continuum, Kagitcibasi (2005) suggested the autonomous-related model of self-reflecting the socioeconomic developments through globalization. Research evidence supporting this model goes back to Value of Children (VOC) Study exploring motivations underlying fertility behavior around seven countries (Kagitcibasi, 2005). In light of this concept of self, the co-existence of Planful Problem Solving and Self-blame among students may be more comprehensible.

Q.3.2. Do Different Ways of Coping Moderate the Relationship between Life Events and Psychological Problems?

This last question tested the moderating effect of ways of coping on the relationship between life events and psychological problems. The effect of Life Events on psychological problems was not moderated by any ways of coping. Similarly in a study on Alzheimer's disease patient's caregiver stressors by Morano (1999), inconsistent with the researcher's hypothesis, coping did not moderate the relationship between major life events and the measures of psychological well-being. Morano partially explained this finding with lack of homogenous scores in either problematic behavior or the hypothesized moderators (i.e. coping). In another study, only the Avoiding coping strategy moderated the relationship between stressful life events and adolescent adjustment (Campos, Delgado, Jiménez, 2012).

5.3 Implications of the study

The results of the current study suggested that cognitive appraisals and coping are important variables in the transactional model of stress due to their direct, mediating, and moderating effects. Lewis and Kliwer (1996) suggested that "Testing potential moderator effects may lead to the identification of subgroups that are more resilient or vulnerable under certain conditions, which has clinical implications" (p. 37). Testing of moderating models might help guide future research on how or why links between stressor, moderator, and outcome variables are conditional. Also, assessing whether there was a mediational effect by examining the degree to which the direct effect between predictor and criterion was reduced after accounting for the mediator may help researchers gain a better understanding of the complex phenomenon.

The findings of the present study underlined the use of developing interventions that facilitate students' examination of how they appraise stressful situations. The five dimensions of cognitive appraisal can be utilized for students to reappraise the stressful event. Focusing on each appraisal dimension, Threat,

Challenge, Controllability, Uncontrollability, and Controllability by Others might serve as a therapeutic tool. For example, counselors may see that a stressful life event or the load of daily hassles can lead students to appraise a situation as more demanding or threatening (Lazarus & Folkman, 1984). Hence, they assess the situation as unchangeable and adopt Escape Avoidance or Accept Responsibility coping.

Discovering the role of coping in line with the transactional theory of stress can provide counseling professionals with the knowledge to develop and implement appropriate, accessible, and acceptable interventions (Lazarus & Folkman, 1984). The results of the current study revealed that Planful Problem Solving coping was only somewhat effective in lowering distress, whereas Accept Responsibility (self-blame) were powerful in amplifying it in both mediational and moderational models. Therefore, it could be interpreted in terms of diathesis-stress models of coping, which suggests that dysfunctional coping styles serve as an interactive vulnerability to increase psychological symptoms (Williams, 2000). Based upon this information, Accept Responsibility as a way of coping may be seen as a vulnerability factor to psychological distress.

A number of studies (Endler & Parker, 1990; Herrald & Tomaka, 2001; Pakenham, 2001) showed the strong relationship between coping styles and psychological well-being on how emotion focused strategies were found to be associated with poor psychological outcomes. Counseling interventions focusing on related appraisals may help the development of more problem focused coping strategies and these changes may have long term preventive effects for the students.

Although the results indicated no significant relationships between seeking social support and psychological well-being in the present study, related literature

(Carver & Sheier, 1994; Dumont & Provost, 1999; Leavy, 1983; McCrae & Costa, 1986; Ozdemir, 2013) proposes evidence on the functionality of seeking social support. It can be speculated that seeking social support becomes more functional in accordance with the availability of support systems. English preparatory students are going through a transition period (70% were living in the dormitories or with their new friends) in terms of social support systems. In other words, the previously established and used social support systems (e.g., family, friends, and relatives) need to be re-established. In the meantime, departmental peer support system assisting for, if not psychological, academic and social concerns can be provided. There are examples of this kind of social support at Boğaziçi University (peer guidance programs in a few departments). In addition, community elective type of coursework that requires actual practice or volunteer networks as well as some activities organized in coordination with academic advisor might be offered. These practices can be extended to other departments utilizing social media channels. An example would be an Ask.fm or a Twitter account for each department, where 2nd or 3rd-year students engage with English preparatory students, answering their questions.

5.4 Limitations of the study

While the results of the current study provided initial support for several aspects of the core assumptions of the Transactional theory, some issues remained unexamined. The design of the study was not longitudinal so the findings may not be consistent over time.

The convenience sampling method used in this study raises questions of representation of the English preparatory students since it only allowed the researcher to reach the students who were present at the time of data collection. Additionally, research data were collected from only one university in one city, so

the results are not generalizable to all English preparatory students in the country. Future research including larger sample sizes with sufficient representation of the whole population could contribute to identifying significant moderating and mediating models of stress, appraisals, coping, and psychological well-being with more generalizable results. This would allow separate analyses of research questions by sex.

Even though the response rate was high at all the data gathering locations, the samples were biased by subject availability and willingness to participate in the study. Due to timing issues, the desired representation of the English preparatory students was not ensured. The number of Advanced Level students was not sufficient to be studied. In addition, when the timing of data collection is considered, it would be plausible to conclude that a particular group of students might have stayed away. The English Preparatory Division of Boğaziçi University sets a prerequisite for students to take the English Proficiency Exam. According to their criterion, a student's overall average score from the tests taken during the semester should be above 60. Therefore, three weeks before the exam, the students whose average scores were below 60 were highly likely to have dropped the courses.

In terms of measures used in the current study, all data were collected through self-report measures, which may have led participants not to respond accurately. This might have several reasons: lack of concern, misunderstanding the items, or social desirability issues. In addition, the measurement of the two indicators of stress (daily hassles and life events) was not free from symptom-contaminated items. Thus, the measures of indicators of stress and the symptoms of psychological problems may not differentiate between experiencing an event and reacting to it. To deal with these limitations, Paykel (as cited in Flannery, 1986) suggested the use of a semi-

structured interview as one possible methodological refinement. Accordingly, given that this study relied on correlational data, drawing causal conclusions are to be handled with caution. Assumptions of a causal relationship in such structure may lead us to post hoc faults.

5.5 Recommendations for future research

The current study offered a theoretical model explaining the dynamic interplays of cognitive appraisals and ways of coping on stress for Boğaziçi University English preparatory students. Although statistical analysis offered partial support for this model, further research is required to strengthen the grounds of this theoretical framework.

The theoretical model should be examined further in prospective studies using path analysis. Owing to the complexity of the transactional model, simultaneous analyses of moderation and mediation using path analysis would help us gain a deeper and clearer understanding of the subject in hand. In addition, future studies should further examine the viability of the transactional model and try to include other factors (such as sex, personality variables, and cognitive attributional styles).

It would be interesting to examine the effects of cognitive appraisals and ways of coping on psychological well-being repeatedly during a longer period of time, especially to test the moderational framework. Thus, a clear differentiation between tentative versus persistent effects of cognitive appraisal and coping on psychological well-being would be demonstrated.

To obtain a more holistic picture, remedial students could be included in a case study in future research. Boğaziçi University offers newly enrolled students to study at English preparatory program for only two semesters. If students fail the

English Proficiency exam (offered four times a year), they do not have the opportunity to continue prep classes for another year. That student is “remedial”. Since they are not attending classes, the researcher would need to contact them individually.

More research is needed to identify the variables that contribute to psychological well-being and their dynamic interactions so that counseling interventions can be developed and employed with the aim of supporting students promoting a balanced academic, social, and personal life.

APPENDIX A

INFORMED CONSENT FORM

BİLGİLENDİRİLMİŞ ONAM FORMU

Bu araştırma, Boğaziçi Üniversitesi Psikolojik Danışmanlık ve Rehberlik programı yüksek lisans öğrencisi Ezgi ÖZKÖK YILMAZ'ın Boğaziçi Üniversitesi Eğitim Bilimleri Bölümü öğretim üyesi Doç. Dr. Deniz ALBAYRAK-KAYMAK'ın danışmanlığında yürüttüğü yüksek lisans tez çalışmasıdır.

Bu çalışma üniversite İngilizce hazırlık sınıfı öğrencilerinin bilişsel değerlendirmeler ve başa çıkma tutumlarının ruh sağlığı ile olan ilişkilerini araştırmaktadır. Bireysel farklılıklar ve çevresel etmenler göz önüne alındığında stresin insan sağlığı üzerine etkisi değişiklik gösterebilir. Stresin bilişsel değerlendirilmesi her birey için özgündür. Bilişsel değerlendirmenin yanı sıra başa çıkma tutumlarının da zorluklarla karşılaşıldığında birey-çevre ilişkisinde aracı rol üstlendiği görülmektedir. Bu çalışmada toplanan veriler anonim olarak grup halinde değerlendirilecek ve üniversitemizde BÜREM (Boğaziçi Üniversitesi Öğrenci Rehberlik ve Psikolojik Danışmanlık Merkezi)'in gelecekte yapacağı müdahale çalışmalarında kullanılmak üzere göz önüne alınacaktır.

Bu projenin gerçekleşmesi için yaklaşık 300 katılımcıya ihtiyaç vardır. Yapmak istediğimiz araştırmanın size risk getirmesi beklenmemektedir.

Çalışmaya destek vermeye gönüllü olacak siz değerli katılımcılarımızın doldurmasını istediğimiz dört adet form bulunmaktadır. Bunlar:

- BÜREM Öngörüşme Formu
- Gündelik Sıkıntılar Formu
- Stres Değerlendirme Ölçeği (SAM)
- Başetme Yolları Ölçeği (WCQ)

Yaklaşık 30 dakikada tamamlanabilecek bu form ve anketlere kimlik bilgisi yazılmayacağından, kimliğiniz gizli kalacaktır.

Bu formu imzalamadan önce, çalışmayla ilgili sorularınız varsa lütfen sorun. Daha sonra sorunuz olursa, aşağıdaki iletişim bilgilerini kullanabilirsiniz. Bu çalışmaya dolduracağınız anketlerle katkı sağlamak istiyorsanız, aşağıda bulunan **“Bu formu okudum ve araştırmaya katılmayı kabul ediyorum”** yazısının altını lütfen imzalayın. Dilerseniz bu formun bir kopyasını saklayabilirsiniz.

Ayırdığınız zaman ve katkınız için teşekkür ederiz.

İletişim Bilgileri: Ezgi Özkök Yılmaz

Boğaziçi Üniversitesi, Eğitim Fakültesi, Eğitim Bilimleri Bölümü,
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BU FORMU OKUDUM VE ARAŞTIRMAYA KATILMAYI KABUL EDİYORUM.

Katılımcının adı:

Tarih:

İmzası:

APPENDIX B

DAILY HASSLES SCALE

Sample Items

Daily Hassles Scale

Please rate each of the following events in terms of how often they cause you distress. Try not to leave any item empty. Thank you.

	Never				Always		
Travelling (to work, shops etc.)	1	2	3	4	5	6	7
Time pressures and deadlines	1	2	3	4	5	6	7
Responsibilities	1	2	3	4	5	6	7
Health concerns	1	2	3	4	5	6	7

Daily Hassles Scale is developed by Cassidy (2000). Translation of the scale was done by the thesis advisor and the author of this study.

APPENDIX C

LIFE EVENTS SCALE

Sample Items

Life Events

Below, some events that could affect people's lives are listed. Please circle each event in terms of the level it caused you distress. If you didn't experienced the event, circle 0. Please do not let any items unanswered. Thank you.

	Never	No influence					Influenced A lot	
Death (Mother, father, sibling, close friends, pet etc.)	0	1	2	3	4	5	6	7
Health problem, sickness or injury	0	1	2	3	4	5	6	7
Serious health problem in the family	0	1	2	3	4	5	6	7
Financial problems	0	1	2	3	4	5	6	7

Life Events Scale was adapted to Turkish by Kaymakçioğlu (2001) through combining "The Social Readjustment Scale" (Holmes & Rahe,1967) and "The Graduate Stress Inventory" (Rocha-Singh, 1994). The scale was reorganized by the thesis advisor and the author of this study.

APPENDIX D

STRESS APPRAISAL MEASURE

Sample Items

Stress Appraisal Measure: Being a Prep Student about being a prep student (proficiency, accommodation, dorm life, etc.). There are no right or wrong answers. Please respond according to how you appraise this situation right NOW. Please answer ALL questions. Answer each question by CIRCLING the appropriate number corresponding to the following scale.		NOT AT ALL	SLIGHTLY	MODERATELY	CONSIDERABLY	EXTREMELY
1	Is this a totally hopeless situation?	0	1	2	3	4
2	Is the outcome of this situation uncontrollable by anyone?	0	1	2	3	4
3	Is there someone or some agency I can turn to for help if I need it?	0	1	2	3	4
4	Does this situation create tension in me?	0	1	2	3	4
5	Does this situation have important consequences for me?	0	1	2	3	4
Stress Appraisal Measure was developed by Peacock, E., & Wong, P. (1990); and adapted to Turkish by M. Durak ve E. Senol-Durak (2013). This measure was used after receiving permission of both sources.						

APPENDIX E

WAYS OF COPING QUESTIONNAIRE

Sample Items

Ways of Coping Questionnaire						
Below are some sentences that indicate the thoughts, behaviors and attitudes of individuals to stressful situations. Please read each item and indicate, by using the following rating scale, to what extent you used it in the situation you have just described. Please do not leave any question unanswered. Thank you.		Not used	Used Rarely	Used Somewhat	Used Quite A Bit	Used to A Great Deal
1	Not wanting anyone to know my problem	0	1	2	3	4
2	Talking to someone to find out what to do more about the situation	0	1	2	3	4
3	Trying to analyze the problem in order to understand it better	0	1	2	3	4
4	Giving solace to myself considering it to be God's decision	0	1	2	3	4
5	Engaging in different jobs to escape from the situation	0	1	2	3	4

"Ways of Coping" Scale was developed by Folkman and colleagues (1986); and adapted and modified to Turkish by M. Durak, E. Senol-Durak, & F. Ö. Elagoz (2011). The scale was used with permission of the authors.

APPENDIX F

BÜREM INTAKE FORM

Sample Items

BOĞAZİÇİ ÜNİVERSİTESİ
ÖĞRENCİ REHBERLİK VE PSİKOLOJİK DANIŞMANLIK MERKEZİ
(BÜREM)
ÖNGÖRÜŞME FORMU

Bu formun arka sayfasında BÜREM'in işleyiş ilke ve yöntemleri hakkında daha fazla bilgi bulabilirsiniz.

BÜREM SORUN ALANLARI LİSTESİ

Yönerge: Aşağıda belirtilen konularda **şu anda** ne derecede **sıkıntı** yaşıyorsunuz?
Lütfen hiçbir maddeyi atlamadan işaretleyiniz.

	<u>Hiç</u>	<u>Biraz</u>	<u>Oldukça</u>	<u>Çok</u>
1. Üniversite yaşamına uymakta güçlük.....	0	1	2	3
2. Derslerde başarısızlık.....	0	1	2	3
3. Derslere devamsızlık.....	0	1	2	3
4. Sınav kaygısı.....	0	1	2	3
5. Zamanı verimli kullanabilmede sıkıntı.....	0	1	2	3

"BÜREM Intake Form" was used with permission of the authors.

APPENDIX G

İNAREK Form

BOĞAZİÇİ ÜNİVERSİTESİ
İnsan Araştırmaları Kurumsal Değerlendirme Kurulu (İNAREK) Toplantı Tutanağı
2014/2

21. 04 .2014

Ezgi Özkök Yılmaz
Boğaziçi Üniversitesi, Eğitim Fakültesi,
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Sayın Araştırmacı,

"Bilişsel Değerlendirmeler, Başa Çıkma ve Psikolojik Sorunlar: Boğaziçi Üniversitesi İngilizce Hazırlık Öğrencileri Örneği" başlıklı projeniz ile yaptığınız Boğaziçi Üniversitesi İnsan Araştırmaları Kurumsal Değerlendirme Kurulu (İNAREK) 2014/24 kayıt numaralı başvuru 21.04.2014 tarihli ve 2014/2 sayılı kurul toplantısında incelenerek etik onay verilmesi uygun bulunmuştur.

Saygılarımızla,

Prof. Dr. Hande Çağlayan (Başkan)
Moleküler Biyoloji ve Genetik Bölümü,
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Psikoloji Bölümü, Doğu Üniversitesi,
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APPENDIX H

INFORMATION ABOUT BÜREM

BÜREM HAKKINDA BİLGİ

Rektörlüğe bağlı bir birim olarak 1993 yılında kurulmuş olan BÜREM öğrencilerimize psikososyal alanda geliştirici ve olası sorunları önleyici nitelikte hizmetler sunar. Bunlar arasında grup çalışmaları, bireysel görüşme, seminer ve destek sağlayıcı yayınlar sıralanabilir. BÜREM’de tam zamanlı, kısmi zamanlı ya da gönüllü konumlarında uzman ve gözetim (süpervizyon) altındaki stajyer öğrenciler çalışmaktadır. Mediko Sosyal Merkezinde bulunan psikiyatr ve dış kaynaklarla işbirliği içerisinde çalışılmaktadır.

Hangi hizmetin uygun olduğunu saptamak amacıyla merkezimize başvuran tüm öğrencilere BÜREM Başvuru Formu verilir ve öngörüşme için randevu tarihi belirlenir. Öngörüşme, uzmanlarımızdan biriyle yapılır ve yaklaşık 30 dakika sürer. Öngörüşme sonrasında öğrenciler uygun hizmete yönlendirilirler. Formlar öğrencilerin özel dosyasında saklanır.

Merkezimizdeki uzman sayısı sınırlı olduğundan sizlerden gelecek istekleri hemen karşılayamayabiliriz. Bu durumda bekleme listesine alınırsınız. **Ayrıca psikiyatr ile görüşme önerilen durumlarda, iki hafta içinde görüşmenin yapıp öğrencinin yeniden BÜREM’e başvurması beklenir.** Bekleme listesine alındığınız durumlarda hizmetlerimizde yer açıldıkça sizinle iletişime geçilir, **bekleme süresinde acil bir durum yaşarsanız merkezimizi aramaktan çekinmeyiniz.**

Merkezimizin ana çalışma ilkeleri **gizlilik, bilimsellik ve dakiklıktır.** Danışman ekibimiz alanlarında uzmanlık dereceleri almış, kendilerini geliştirmeyi sürdüren ve mesleki gözetim alan bireylerden oluşur. Merkezimizde gönüllü ve kısmi zamanlı uzmanlar ve stajyer öğrenciler de aynı yaklaşımla hizmet verirler.

Hizmetlerimiz öğrencilerimizin gereksinimlerini daha iyi karşılamak üzere geliştirilmeye çalışılır. Bu amaçla değerlendirme ve araştırma yürütülür.

İşleyiş ilke ve yöntemlerimizle ilgili dile getirmek istediğiniz konular varsa, onları danışmanınızla görüşebilir ya da bize e-posta iletisi gönderebilirsiniz. Merkezimiz ve yaptığımız çalışmalar hakkında internet sayfamızdan bilgi alabilirsiniz.

Telefon: (212) 359 7139
E-posta: burem@boun.edu.tr
İnternet adresi: <http://burem.boun.edu.tr>

(Bu sayfayı koparıp yanınızda götürebilirsiniz.)

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