Variations in Emotion Regulation in Predicting Perceived Stress as a Function of Self-Construals: A Cross Cultural Comparison of Lebanese and Dutch Youth

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Abstract

The purpose of this cross-cultural study is to assess the emotion regulation strategies of reappraisal and suppression in predicting through independent and interdependent self-construals, the perceived stress levels and overall wellbeing of university students in Lebanon (N = 153; M_{Age} = 21) and the Netherlands (N = 206; M_{Age} = 19). Transitioning into the phase of university life is considered a stressful period for young adults where identities continually evolve and form, new responsibilities, and interpersonal and academic pressures emerge. Emotion regulation in such a context is important to buffer against stressors and promote overall wellbeing. Literature from predominantly Western samples has pointed to negative psychosocial outcomes associated with suppression, but studies from non-Western contexts and specifically Asian samples, have failed to support negative effects of suppression. On the contrary, positive outcomes are observed. Such variations have been associated with cultural values of individualism and collectivism, and in turn self-construals. That said, relying on one non-Western sample as a representative of how emotion regulation is utilized across all is also problematic as it assumes homogeneity across all non-Western contexts disregarding possible individual differences and intergroup differences within non-Western multicultural contexts. Hence, in this study Lebanon was studied as a non-Western, multicultural context owing to its sectarian and cultural diversity with waves of Westernization and influences from other Arab and non-Arab countries in the region. Applying a survey design, paper and pencil data collection was used in Lebanon and an online survey was administered in the Netherlands after which the hypothesized model (carrying 12 hypotheses) was tested separately for each student sample using path analysis through SPSS AMOS. Results revealed minimal use of suppression in both samples with no association with the interdependent self construal (Lebanon b = .09, p =.329; Netherlands b = .04, p =.680). Reappraisal was reported as an effective strategy in maintaining

overall wellbeing in both samples(Lebanon wellbeing b =-.17, p =.025; Netherlands b =-.30, p =.01). The independent self-construal was endorsed by both Lebanese and Dutch students, indicating a pull towards individualism in both contexts, which is contrary to earlier classifications of Lebanon based on conclusions from the overall region as opposed to the unique context. Interestingly neither the endorsement of independent or interdependent self-construals predicted perceived stress levels or wellbeing for the Lebanese sample ($p < .05$), and no indirect effects were supported from emotion regulation to wellbeing and stress through self-construals for this sample ($p < .05$). Within the Dutch sample, and as expected, the endorsement of an independent self-construal predicted reduced levels of stress (b = -.34, p =.01). Additionally two hypothesized indirect effects were supported such that Dutch students who endorsed cognitive reappraisal as an emotion regulation strategy and held an independent self-construal had significantly lower levels of stress (b = -.099, p = 0.001) while those who endorsed expressive suppression as an emotion regulation strategy and held an independent self-construal reported increased levels of stress (b = 0.089, p = 0.002) The present findings are discussed in reference to previous research in the field with specific emphasis placed upon Kagitcibasi's (2002) family model of emotional/psychological interdependence in discussing results from Lebanon.The present study also argues against the unidimensional view of culture and explains the need to adjust "culture-as-a-system" generalizations. The Dutch sample's moderate pull towards the interdependent self-construal further highlighting the need to change the lens with which culture is viewed.

Keywords: emotion regulation, stress, wellbeing, culture, self-construals, university students, Lebanon, the Netherlands

Variations in Emotion Regulation in Predicting Perceived Stress as a Function of Self-Construals: A Cross Cultural Comparison of Lebanese and Dutch Youth

Introduction

The purpose of this cross-cultural study is to assess how emotion regulation (reappraisal and suppression) predicts psychological wellbeing in a sample of university students in Lebanon and the Netherlands, as influenced by independent and interdependent self-construals. The following sections will elaborate on the definition of, and relationship between the following variables: emotion regulation, stress, well-being, culture, and self-construals among university students. This proposal will also include the justification of selecting these variables and the potential contribution of this study to the research and clinical fields.

University Students, Stress, and Wellbeing

Transitioning into the phase of university life is considered a stressful period in the lives of young adults; within this period identities continually evolve and form, new responsibilities emerge, some students experience moving away from the comfort of their hometowns and families alongside the plethora of interpersonal and academic experiences and pressures they must endure (Monteiro, Balogun, & Oratile, 2014). These changes university students experience are not limited to the early transitional period of entering college, they rather continue throughout the university experience and merge with other adult-like pressures such as employment and long-term relationships (Monteiro et al., 2014). It is important to mention that the aforementioned stressors do not cause tension or anxiety on their own, instead stress results from an interaction between the stressor and the person's assessment of the situation and their reaction to the stressor (Heckert, Niebling, & Ross, 2008). Earlier research conducted using the Student Stress Survey discovered that the most commonly reported source of stress was

intrapersonal, with the top five answers being: change in sleeping habits, vacations/breaks, change in eating habits, new responsibilities, and increased class workload (Heckert et al., 2008). A more recent study by Hamaideh (2011) using the Student Stress Inventory found that students reported experiencing self-imposed stress such as competing with others and pressures (e.g. workload), and used cognitive responses to deal with them such as analyzing the stressful situation to foster a better understanding (Hamaideh, 2011). Other frequently reported stressors include financial difficulties and changes in social activities as (Monteiro et al., 2014).

One of the challenges in defining "stress" comes from considering the wide variety of individual reactions to the broad range of stressful events experienced on a daily basis. The multitude of factors leaves room for ambiguous definitions and interpretations of "stress". Selye (1973) proposed a physiological model that conceptualized stress as "a general response to toxic stimuli regardless of the nature of the stressor or characteristics of the individual experiencing the stress" (Monteiro et al., 2014, p. 153). Lyon (2000) viewed stress as "progressing through stages of alarm, resistance and exhaustion that could eventually cause harm to one's physiological system by disrupting balance" (Monteiro et al., 2014, p. 153). Folkman and Lazarus (1985) defined stress as "a relationship between the person and the environment that is appraised by the person as relevant to his or her well-being and in which the person's resources are taxed or exceeded" (Folkman & Lazarus, 1985, p. 150); this definition will be used for the purpose of this study because it puts forth the understanding of how stress is experienced and perceived differently across individuals, thus not solely focusing on the physiological component of stress nor just the environmental stimuli.

As mentioned, heightened levels of psychological distress concerning the university student population have been reported, with the Royal College of Psychiatrists (2003) specifying a

greater need to understand the psychological wellbeing of students (Bewick, Koutsopoulou, Miles, Slaa, & Barkham, 2010). Higher levels of positive affect, lower levels of negative affect, and life satisfaction have been recognized as indicators of wellbeing (Schutte, Manes, & Malouff, 2009). Ultimately, an individual's perceived stress level speaks to their overall wellbeing levels.

Keeping in mind that context as well as individual differences play a role in the differing perceptions of stress, it is necessary to examine strategies which are employed in order to manage stress. Variation may appear regarding the impact of a stressful situation on an individual due to their personal assessment of the emotional component of the stress-inducing situation. Assessing the emotional impact of a situation leads to deciding on how to tackle it, which gives rise to the process of emotion regulation (Monteiro et al., 2014).

Emotion Regulation

Emotion regulation can be defined as "the processes by which individuals influence which emotions they have, when they have them, and how they experience and express these emotions" (Pepping, Duvenage, Cronin, & Lyons, 2016, p. 303). Gross (2007) proposes two different strategies that fall under the heading of emotion regulation: cognitive reappraisal and expressive suppression. Cognitive reappraisal is defined as a strategy that modifies and redefines the thoughts precipitated by an emotion-eliciting situation (Pepping et al., 2016). This in turn allows for the altering of its emotional impact (Pepping et al., 2016). For example, a student fails a series of tests and thinks negatively about themselves and their performance, but then revisits the emotion-eliciting situation and alters it to view it as a way of challenging themselves. Expressive suppression has been defined as a response-focused strategy where the individual makes conscious efforts to inhibit the external expression of elicited emotions, even though the

internal experience of the emotion is still evident (Pepping et al., 2016). For instance, when a friend makes you angry, you may try to prevent further conflict by suppressing any outward expressions of anger until you figure out a way to resolve the problem.

Considering there is more than one approach to regulating emotions, studies have examined the resulting effects of the emotion regulation strategy people engage in. Reappraisal has been associated with an overall better well-being and affective and social functioning (Monteiro et al., 2014). Bearing in mind that reappraisal modifies the way in which an emotion-eliciting situation is understood, the individual is able to dampen its impact thus allowing the emotions to be interpreted and assessed in a productive manner (Monteiro et al., 2014). Studies have also shown that expressive suppression leads to more negative outcomes when compared to cognitive appraisal. Suppression has been linked to memory impairments and increases in physiological reactiveness, with some research showing relations between suppression and depression vulnerability in college students (Monteiro et al., 2014). Although these findings have been replicated with a congruency in results, there have been mentions of cross-cultural differences that could influence the negative outcomes of emotion regulation, mostly suppression (Monteiro et al., 2014). Research by Misra and Castillo (2004) have focused on differences between the perceptions of academic stressors and reactions to these stressors between American and international students, with the proposed hypotheses centering around expecting differences between the two groups of participants as a function of their cultural backgrounds (the international students exhibiting greater reactions to stressors) (Misra & Castillo, 2004). Reactions to stressors were sectioned into four groups: physiological (e.g. sweating, headaches), behavioural (e.g. crying, drug use), emotional (e.g. anxiety, anger), and cognitive (based on participant's ability to analyze and think about the stressful situation and using effective

strategies to decrease stress) (Misra & Castillo, 2004). The strategies to reduce stress referred to in the cognitive reaction section were not specified. The findings did not support their hypotheses because the international students reported lower perceived levels of academic stress and fewer reactions to the stressors when compared to the American participants; both groups of students recorded more frequent cognitive reactions to stressors but the American participants reported higher behavioral reactions such as crying and self-abuse (Misra & Castillo, 2004). Although the authors speculated that their results may be due to the diversity of cultural backgrounds in their international student sample, specific constructs relevant to culture were not measured and specified in order to isolate the particular aspects that may have influenced their findings. In addition, the ethnicities of the international students were not specified which hinders a comprehensive understanding of the variances within different cultures. With that said, it is critical to venture into the bigger picture of culture in order to clarify the necessary distinctions that interplay with emotion regulation, well-being, and stress.

Culture

Culture serves an important function of structuring, organizing, and coordinating the complexity of human social life, such as norms, beliefs, perceptions, behavior, and emotion in order to maintain social order and prevent social chaos (Matsumoto, Nakagawa, & Hee Yoo, 2008; Diaz & Eisenberg, 2015). Four characteristics have been purported to characterize cultures and their values: self, goals, relationship, and determinants of behavior (Matsumoto et al., 2008). *The self*, is described as maintaining a dynamic and overarching nature that holds important information relating to how the individual interacts with their specific environment (Harb & Smith, 2008). While holding the function of organizing an individual's social and psychological experiences, it is said to regulate intentional behaviors thus leading towards a more effective

functioning in a given social world (Harb & Smith, 2008). Relevant to the self is *self-construal,* which is the way *the self* is defined and understood by the individual, in reference to the structure of knowledge pertaining to the individual's surrounding environment (Harb & Smith, 2008). With that said, researchers have proposed that individuals within a cultural context develop emotional, motivational, and cognitive processes through socialization which allows for effective functioning in society (Kitayama, Markus, Matsumoto, & Norasakkunkit, 1997). Based on the understanding of how the self regulates behavior in order to achieve effective social functioning, Harb & Smith (2008) argued that it is reasonable to assume that the way in which the self is understood in one cultural context may differ from the way in which is it understood in another (Harb & Smith, 2008).

Research has examined dimensions of cross-cultural variations, and one such dimension is collectivism-individualism. Collectivism has been defined as a social pattern which embodies closely linked individuals that view themselves as part of one or more groups (family, co-workers, tribe); they are chiefly driven by the norms and duties of the collectives, give priority to the communal goals as opposed to personal goals, with emphasis placed on the connectedness of the members within the collective (Triandis, 1995). Individualism, on the other hand, has been defined as a social pattern containing loosely linked members that view themselves as independent of groups; instead they are primarily motivated by their own needs and preferences, with priority placed on their own goals, and emphasis on rational analyses of the benefits and costs of associating with others (Triandis, 1995). Collectivistic cultures tend to foster in-group goals, interdependent selves, encourage relatedness and communal relationships as well as value norms within their society (Matsumoto et al., 2008). Individualistic cultures tend to adopt personal goals, development of independent constructs of self, foster rationality and

interpersonal exchange with attitudes and emotions considered to be important determinants of behavior (Matsumoto et al., 2008). Most research conducted in this area focuses on comparisons between Asian samples (collectivist) and samples from the United States or Europe (individualist), with vast amounts of understanding and awareness being gained (Ayyash-Abdo, 2001). However, findings from these geographic areas cannot be generalized across the world and so, more research is required in order to understand and conceptualize differences in cultures.

Considering the aforementioned results, it is necessary to describe where Lebanon stands on this spectrum. Lebanon is geographically located as a crossroad link between the Mediterranean with Asia and Europe thus giving rise to a multicultural heritage and cosmopolitan character, deeming it as "Arab colored by Western influences, mainly French and American." (Ayyash-Abdo, 2001, p. 505). Given this description, it would be inaccurate to solely categorize Lebanon into either an Asian Collectivistic or Western Individualistic orientation. Rather, emphasis should be placed on how multicultural societies foster a combination of cultural values and while it may be reasonable to assume that most individuals share mutual values and characteristics, dispositional characteristics are not all esteemed to the same extent across cultures or even within the same culture (Diaz & Eisenberg, 2015). In addition, it is important to note that when referring to individualism-collectivism, there is an underlying assumption that the member of a specific society is uniformly individualistic or collectivistic (Ayyash-Abdo, 2001). However, it has been put forth that these cultural orientations can be considered as multidimensional rather than polar opposites; an individual can be high on one and low on the other, with emphasis placed on both tendencies (individualistic and collectivistic) co-existing within cultures and individuals (Ayyash-Abdo, 2001; Taras, et al., 2014). This

recognition of intragroup variation allows for a more specific understanding of an individual's culture and its influence.

In addition to understanding Lebanon's multicultural context, it is necessary to describe that of the Netherlands too. The Dutch society has been classified as high on Individualism (Oppenheimer, 2004), yet similarity to the Lebanese context is found in its history of multiculturalism. Since the 1960s, several minority groups (immigrants from former colonies such as Moluccas in Indonesia, refugees, and guest workers from Turkey and Morocco) have settled in the Netherlands and continued to reside there (Van der Veen, I., Meijnen, G., 2000). As a result of the complex and sustained inflow of ethnicities, Netherlands has altered its once high level of ethnic homogeneity towards a more diversified status (Vasta, 2007) and thus cannot be included in the present study solely as a comparison group. Within the present study, these two samples hold multiple similarities such as the multigroup context, and perhaps the influence of the Western world. English is considered to be the first teaching language and the present study has targeted a population sample with an age range of 18 and above. Furthermore, both population samples will be yielded from private universities which may not be representative of the entire population. This is necessary to keep in mind to avoid drawing generalizable conclusions based solely on country level differences while glossing over individual variations, however, it is also of importance to understand the similarities between the two sample pools yet still to expect differences reflected through endorsement of self-construals, ways in which they regulate emotions, and appraisal of differing stressors.

Rationale of the study

Most cross-cultural studies have been grounded in bicultural comparisons between North American and East Asian participants, as they are assumed to represent variances regarding the

broad cultural dimension of individualism-collectivism (Becker et al., 2012). Findings from these studies have unquestionably yielded significant information and provided a foundation for cross-cultural exploration, however, sole reliance on these studies is problematic; it is unfounded to assume that two countries can be held representative of the cultural orientation of individualism-collectivism worldwide, if one aims to draw more secure conclusions about the implications of a given cultural orientation (Becker et al., 2012). Therefore, this study will target an unresearched area in the Middle Eastern region (Lebanon) and provide much needed information regarding cultural influences to be applied on an international scale. In addition to being under researched, Lebanon has been described as having a unique intimate connection between politics, religion, and demography (Faour, 2007). Divisions across and within religions prevail in Lebanese societies, broken down into 18 sects mostly belonging to the two large clusters: Muslims and Christians (Faour, 2007). Religion in Lebanon is said to not just be the function of individual preference reflected through worship, but rather it often determines political and social identification, with sects playing a fundamental role as they are considered the "primary social organization through which political security has been maintained" (Faour, 2007, p. 909; Ayyash-Abdo, 2001). Therefore, it is unfounded to assume homogeneity across these multiple sects and lump them in together to form one cultural or societal orientation regarding Lebanon, the same way it is unsubstantiated to assume two countries (East and West) can be considered representative of a cultural orientation worldwide.

Furthermore, studies such as Misra and Castillo (2004) focused on the differences between the perceptions of academic stressors and the reactions to these stressors between American and international students, with the proposed hypotheses centering around expecting differences between the two groups of participants due to their cultures (mainly the international

students exhibiting greater reactions to stressors) (Misra & Castillo, 2004). The findings did not support their hypotheses because the international students reported lower perceived levels of academic stress and fewer reactions to the stressors when compared to the American participants (Misra & Castillo, 2004). Although they considered the possibility of differing cultures influencing their results of perceived stress, specific constructs of culture were not measured and specified in order to isolate the particular aspects that may have influenced their findings. In addition, the ethnicities of the international students were not specified which hinders a more encompassed understanding of the variances within different cultures. Such studies have not fully given the role of culture it's weight of influence. When cultural influences are ignored, there is a greater risk of arriving at mistaken conclusions (Butler et al., 2007). Earlier researchers and the likes of Misra & Castillo (2004) investigating the consequences of suppression, point towards the conclusion that suppression is typically an undesirable form of emotion regulation (Butler et al., 2007). However, Diaz and Eisenberg (2015) explored the potential role of culture in emotion regulation and concluded that expressive suppression, usually associated with negative psychological effects (higher levels of negative affect) is less debilitating in collectivist cultures as well as for individuals with bicultural European/Asian values, when compared to individualist cultures (Diaz & Eisenberg, 2015). Such findings suggest that at least some cultural groups are able to suppress without experiencing the accompanying negative repercussions of this emotion regulation strategy (Butler et al., 2007). These findings are relevant to the present study as it aims to assess whether culture influences the typical negative implications of suppression for individuals holding a collectivistic orientation.

Work by Diaz and Eisenberg (2015) as well as Butler et al. (2007) address the need to attend to various cultures when studying the relationship between emotion regulation and stress

(Diaz & Eisenberg, 2015; Butler et al., 2007). Consequences expected to be affected by cultural influences are anticipated to be more pronounced when specifying clearly differentiated cultural groups, which the present study aims to conduct by identifying each individual's cultural orientation (Butler et al., 2007). This notion carries implications for understanding diverse cultures and further contributing to an under researched region.

Significance of the study

Researchers such as Hunt and Eisenberg (2010) have directed their attention towards the university student population due to their unique environment and the transition they go through. They have explained that there is a growing concern regarding university students' mental health, with reported increases in university counseling centers of student psychological problems (Monteiro et al., 2014). Students seem to be experiencing more severe stress, possibly due to the difficult process of transitioning into university life. An individual's ability to cope can be overtaxed, with their psychological recourses depleting, when stressors accumulate, leaving an increased chance of psychological distress (Misra & Castillo, 2004). Hence it is important to gain a better understanding of stressors and their impact on individuals, in order for counsellors and psychologists to be equipped with adequate information to effectively aid the students in managing their stress. In addition, gaining more understanding regarding this unique population will allow for improved prevention and intervention strategies as well as stress management programs.

Furthermore, gaining more knowledge regarding the specific field of emotion regulation is important since emotions serve as influences of behavior and hold important social purposes; for example, apprising others of one's own internal conditions and intentions, as well as providing motivation for other's behaviors and evoking responses in others (Matsumoto et al., 2008).

Keeping in mind that the emotion regulation strategy an individual opts to employ is a function of their knowledge structures, which are shaped by their sociocultural context (Diaz & Eisenberg, 2015), it is clear that furthering our understanding of emotion regulation within this field holds implications for providing a more well-rounded understanding of an individual.

One study explores the mentioned variables in this study (emotion regulation, culture, and stress) and investigated the relationships amongst them (Monteiro et al., 2014). Other work has focused on relationships between stress and emotion regulation, gender and emotion regulation or has been conducted in Western samples and compared to Asian counterparts to address culture. The present study will contribute to the research field by providing a body of work that, not only explores the combined variables and their relationships, but specifically investigates the role of culture as relevant to emotion regulation strategies used and how they may then relate to stress level reporting. Not enough studies have specified facets of culture and examined its role, which puts researchers at risk of drawing erroneous conclusions (Butler et al., 2007).

Exploring the relationships amongst the variables of emotion regulation, stress, and culture, will allow a more comprehensive understanding of the individual student as well as contribute to a larger understanding of self-construals within Lebanon. This in turn will provide necessary contributions to the literature pertaining to culture, stress, university students, and emotion regulation within this region. Imperative to mention is the conceptual inclusion of culture within the present study – the current study does not claim to measure culture but rather is using the construct to provide a well-encompassed backdrop of the rich variable and to provide a larger context in which to understand the literature, and ultimately comprehend the individual's endorsement of either self-construal and its influence on stress and overall wellbeing levels. All in all, there are great implications for furthering the scope of comprehension regarding

these variables for mental health professionals to apply in their future research or in practical means within the clinical setting.

Research Question

1. How does the use of an emotion regulation strategy (reappraisal and suppression) predict wellbeing, through self-construals (independent / interdependent), in university students in Lebanon as Compared to the Netherlands?
2. Where on the continuum of independent and interdependent self-construals will Lebanese students fall?

Literature Review

Wellbeing

Psychological distress levels in university students have been identified as a cause for concern with research reporting an increase in said distress levels within the student population (Bewick et al., 2010). Social support, debt, socio-economic status, and stress are all factors that may influence an individual's wellbeing levels at a given time (Bewick et al., 2010; Monteiro et al., 2014). Higher levels of positive affect and lower levels of negative affect (Schutte et al., 2009), in addition to low levels of overall psychological distress have been recognized as indicators of wellbeing (Bíró, Balajti, Ádány, & Kósa, 2010; Moeini, Shafii, Hidarnia, Babaii, Birashk, & Allahverdipour, 2008) and therefore used as the definition of the construct for this study. Wellbeing has been assessed in relation to cultural value orientations (Matsumoto et al., 2008) and emotion regulation strategies (Gross & John, 2003; Schutte et al., 2009), with the relevant literature for each situation provided in the following sections.

Stress

Potentially stressful events occur in everyone's life almost daily, be it getting stuck in traffic, losing your keys, studying for an exam, or death of close friends or family members (Monteiro et al., 2014). Lazarus and Eriksen (1952) postulated that stressful conditions do not produce dependable effects; for some people the stress experienced by a given condition may be great, while for others not so significant (Lazarus, 1993). To that effect, individual differences in motivational and cognitive variables need to be considered, and these are thought to intervene between the stressor and the reaction (Lazarus, 1993). However, the study of stress and its process has been characterized by ambiguous and inconsistent terms and so the following definition will be used for the purpose of this study because it emphasizes the understanding of

how stress is experienced and perceived differently across individuals, thus not solely focusing on the physiological component of stress nor just the environmental stimuli precipitating stress. Folkman and Lazarus (1985) define stress as "a relationship between the person and the environment that is appraised by the person as relevant to his or her well-being and in which the person's resources are taxed or exceeded" (Folkman & Lazarus, 1985, p. 150).

Regardless of the terminology, Lazarus (1993) explains that four main concepts must always be considered: (1) a causal external or internal agent; (2) an evaluation (by the mind or physiological system) that distinguishes between what is considered threatening and what is considered benign; (3) coping processes utilized by the mind or body to deal with the stressful demands; and (4) a complex pattern of effects on the mind and body that is typically referred to as the *stress reaction* (Lazarus, 1993). With that said, it is logical to assume there are a variety of sources of stress depending on the individual as well as a variety of responses to said stress. It is therefore important to differentiate between types of stress and the different areas they impact due to diverse responses.

University Students and Stress. College students are faced with a unique set of stressors that may be overwhelming (Doumit, 2012). The specific population of university students has been presented by D'Zurilla and Sheedy (1991) and Towbes and Cohen (1996) as being particularly prone to stress due to the transitional nature of university life (Heckert et al., 2008). These young adults encounter many changes in their lives, including moving away from home to attend university, having to meet certain academic expectations, as well as managing differing interpersonal and environmental changes (Monteiro et al., 2014). Wright (1964) emphasizes the difference between stressors and pressures students face when compared to non-students as a function of the environment that college students live in; while jobs outside of college have their

accompanied stress of evaluation by superiors and striving to reach a certain goal, there is continuous evaluation in the lives of college students as they must endure weekly tests and papers whilst coping with the pressures of achieving good grades and earning a degree (Heckert et al., 2008). These mentioned sources of stress mostly fall into the category of academic related stress, which constitute only a portion of the type of stress faced by university students. Research on adolescent stress has shifted its attention from focusing on the traumatic events or chronic stressors branded by loss and threat, towards demands, normative challenges and developmental tasks (Doumit, 2012) such as intrapersonal, environmental, interpersonal, and academic stressors (Heckert et al., 2008). More specifically, research has shown that change in sleeping habits, vacations / breaks, change in eating habits, new responsibilities and an increased workload are among the five most frequently recorded stressors (Heckert et al., 2008). Sources of stress therefore are likely to be a consistent and regular occurrence in the lives of university students, considering the transition they are making (Doumit, 2012). It is necessary to mention the differing types of stress for purposes of clarity regarding the present study. The types of stress will not affect the outcome but are included to provide a well-encompassed understanding of the stressors university students face, and to highlight that their nature has shifted from the typical focus of traumatic stressors.

In light of discovering the different sources of stress, researchers such as Hamaideh (2011) were interested in exploring the mechanisms behind dealing with stress. Through the use of the Student Stress Inventory, the results showed that students conveyed self-imposed stress (e.g. competing with others) and pressures (e.g. workload), and more likely used cognitive responses to deal with them (e.g. analysing the stressful situation) (Hamaideh, 2011). According to Jang and William (2002), stress goes hand in hand with emotional experiences and therefore

the way an individual reacts when they're stressed reflects characteristics of emotion regulation (Monteiro et al., 2014). Thus, it is necessary to explore the field of emotion regulation as it plays a vital role in dealing with stress (Moriya & Takahashi, 2013).

Emotion Regulation

Emotion regulation can be defined as "the processes by which individuals influence which emotions they have, when they have them, and how they experience and express these emotions" (Pepping et al., 2016, p. 303). Over the last two decades, there has been an increasing interest in understanding the process of emotion regulation and how it affects physical and psychological wellbeing (Singh & Mishra, 2011). Considering people use different strategies to regulate their emotions, Gross (1999) proposed a process model that divides these strategies into two main categories: (1) cognitive reappraisal, which is a cognitive change process where the individual modifies their thoughts in order to alter the emotional response (Gardner, Betts, Stiller & Coates, 2017) and (2) expressive suppression, a behaviorally oriented approach where the individual deters external cues of emotional states, whilst the internal experience of the emotion still remains (Pepping et al., 2016). The underlying concept of this model holds that an emotion begins with an evaluation of an emotional cue because when it is attended to and assessed in a specific way, the cue will trigger a coordinated set of responses ranging across physiological, behavioral, and experiential systems (Gross & John, 2003).

Gross (2002) theorized that outcomes will differ depending on where in this "emotion-generative" process – early versus later – emotion regulation takes place (Monteiro et al., 2014). Cognitive reappraisal, categorized as an *antecedent-focused strategy*, occurs early on and intervenes before the emotion response tendencies have been produced fully thus proficiently altering the consequent emotion trajectory (Gross & John, 2003). Alternately, expressive

suppression is classified as a *response-focused strategy* as it occurs relatively later on in the process, mainly adjusting the behavioral aspect of the emotion response tendencies (Gross & John, 2003).

Empirical examinations in experimental and neuroimaging studies have found that individuals that regulate their emotions using the reappraisal strategy tend to report more positive affect, less negative affect, and overall greater psychological wellbeing as compared to others (Singh & Mishra, 2011). The use of suppression as an emotion regulation strategy has been shown to be related to negative affect, reduced social support, and in some instances depression (Singh & Mishra, 2011). In an experimental design, Gross (1998) examined the affective consequences of reappraisal and suppression, by randomly assigning participants into three groups: (1) a reappraisal group – where participants were instructed to watch a film that elicits negative emotions and told to think about the film in order not to respond emotionally; (2) a suppression group – where participants were instructed to hide their emotional responses to the negative emotion-eliciting film so that the observer would not be able to see what they were feeling; and (3) a control group (Gross & John, 2003). The results showed that suppression decreased the behavioral expression of negative emotions but did not decrease the subjective experience of negative affect (Singh & Mishra, 2011). In addition, participants in the suppression group exhibited more signs of physiological activation, specifically shown in the cardiovascular system, when compared to participants who were instructed to think about the film as they watched it (Singh & Mishra, 2011). In contrast, participants in the reappraisal group did not experience any increase in physiological activation and exhibited a decrease in both their experience of the negative emotion as well as the behavioral expression of it (Singh & Mishra, 2011). Similar results were also found by Mauss, Cook, Cheng and Gross (2007) where under an

anger stimulating content, participants assigned to a high reappraisal group, showed a more adaptive profile of emotion experience and cardiovascular responding since they reported less anger, less negative emotion, and more positive emotion than those assigned to a low appraisal group (Mauss et al., 2007). These findings are suggestive to reappraisal allowing efficacious down-regulation, even within the context of strong negative emotion as anger (Singh & Mishra, 2011).

Troy, Shallcross, & Mauss (2013) highlight the need to examine individual level differences, seen in their understanding of emotion regulation depending on the specific context in which the strategy is used. Their literature puts forth the controllability of the situation (the degree to which one can influence/control the situation's outcome) as a critical factor in an individual's regulatory efforts. For instance, when dealing with an uncontrollable stressor (e.g. illness of a loved one), reframing and changing the way you think about the situation may be ineffective but rather it is suggested to use emotion-focused coping, which allows the individual to control the only thing they are able to in this context: their emotions (Lazarus, 1993; Troy et al., 2013). An example of a controllable stressor might be potentially losing your job due to poor performance; here it may be more effective for the individual to adjust their situation by using problem-focused coping skills, such as spending longer and more productive hours at work rather than changing their emotions about the situation (Lazarus, 1993; Troy et al, 2013). This notion supports a person-by-person approach to understanding the effects of emotion regulation, as the context they are being used in is of relevance (Troy et al., 2013). Since there are differing strategies, it is necessary to understand which strategies establish effective emotion regulation outcomes (Troy et al., 2010).

Emotion regulation has also been studied among children. In a study by Gardner, Betts, Stiller, and Coates (2017) the role of children's emotion regulation in maladaptive coping following school-based peer victimization found negative consequences associated with expressive suppression and higher levels of maladaptive coping (Gardner et al., 2017). Furthermore, Pepping et al., (2016) studied dispositional mindfulness "psychological trait that reflects an individual's capacity and tendency to abide in mindful states over time" (Pepping et al., 2016, p. 303), the accompanying psychological outcomes and their association with emotion regulation strategies. Their findings concluded that individuals who are considered less mindful are more likely to engage in efforts to suppress emotional experiences, which are ultimately associated with higher levels of depression, anxiety, and stress (Pepping et al., 2016). These findings further highlight the association between maladaptive emotion regulation strategies, such as expressive suppression, and the associated outcomes of higher levels of stress and negative affect.

The studies presented in this section are predominantly experimental, and through this methodology, the findings can contribute to causal inferences with regards to the effect of each emotion regulation strategy on the given dependent variables of interest through directly manipulating the differing processes (Gross & John, 2003). However, it is important to keep in mind that experimental studies are unable to tackle whether individuals exhibit systematic differences in their use of emotion regulation strategies, whether the use of one strategy is correlated with the use of another strategy, and whether there are differences in the use of strategy based on ethnicity or gender (Gross & John, 2003). With that said, the survey methodology this study employs sheds light on the natural use of each emotion regulation

strategy across two cultural contexts and examines links between these strategies, stress and wellbeing through testing a path model.

Emotion Regulation and Wellbeing. Schutte, Manes, & Malouff (2009) aimed to expand the empirical testing of Gross and John's process model of emotion regulation by exploring the wellbeing outcomes associated with antecedent focused regulation (i.e. reappraisal) as compared to response modulation (i.e. suppression), considering the majority of the literature on this topic attributes better outcomes to antecedent focused regulation. Reappraisal was found to be associated with more positive mood, higher emotional intelligence, and greater life satisfaction, whilst suppression was associated with less life satisfaction, less positive mood, more negative mood, and lower emotional intelligence (Schutte et al. 2009). These findings are in line with previous research where reappraisal is associated with better outcomes than suppression. However, when response modulation was examined alone, it showed to be associated with greater life satisfaction and more positive mood (Schutte et al. 2009). Such a result suggests that response modulation or suppression may not necessarily be harmful, but rather could hold benefits sometimes. Of relevance to note is the mentioned study focused solely on Australian participants and so cannot be generalized across all cultures and contexts.

Gross & John (2003) tested the habitual use of reappraisal and suppression, interested in the longer-term cumulative effect on wellbeing. Individuals using reappraisal strategies reported fewer depressive symptoms, more life satisfaction, and greater self-esteem while individual using suppression reported the opposite: lower levels of self-esteem, less satisfaction with life, and more depressive symptoms (Gross & John ,2003). Conclusions drawn from this study reflected individual differences in use of emotion regulation strategy and focusing on the long-

term effects of either strategy, allowed to assess the systematic effects apparent in natural occurring rather than experimental situations (Gross & John, 2003).

Considering the importance placed on individual differences, Gross and John (2003) specified the need in future research to focus on specific ethnic groups or varying cultural practices in order to foster more specific hypotheses regarding individual and group level differences when evaluating the use of emotion regulation strategies. In line with this suggestion, the present study assessed emotion regulation strategies in relation to the differing cultural orientations between the Netherlands and Lebanon, whilst recognizing there are individual differences that lay between and within the mentioned cultures.

Culture

"Culture is the collective programming of the mind that distinguishes the members of one group or category of people from others" (Hofstede, 2011). This definition of culture presents a shorthand description of the term and touches upon the understanding that individuals differ across cultures. The social life of human beings is multifaceted, as individuals belong to several groups that contain multiple social norms and roles; should these individuals not be coordinated and organized within their groups, there is potential for social chaos (Matsumoto et al., 2008). Thus, culture serves an essential function of providing this necessary organization and coordination with the purpose of maintaining social order (Matsumoto et al., 2008). With that said, the following sections will break down dimensions along which cultures are evaluated, and the outcomes of such dimensions when considering emotions. This gives rise to distinguishing between various concepts within the overarching umbrella of "culture" in order to gain a more detailed understanding of the variances that attribute to these differences.

Dimensions of Culture. Hofstede (1983) described four dimensions in which to understand national cultures: (1) Individualism versus Collectivism – the relation between an individual and their fellow individuals; (2) Power Distance – how society deals with the fact that people are unequal physically or intellectually (some societies' inequalities grow until they are inequalities in power and wealth which are passed on to generations and not necessarily related to physical/intellectual abilities); (3) Uncertainty Avoidance – how society deals with the fact that the future is unknown and will always be (*strong* uncertainty avoidance societies tend to be more anxious and aggressive as they are socialized to try and beat the future whilst *weak* uncertainty avoidance societies are tolerant and feel less threatened due to their choice to accept the uncertain); and (4) Masculinity versus Femininity – division of roles between the sexes in society (Hofstede, 1983).

Specific to the context of this study are Lebanon and Netherlands. Lebanon was grouped with Egypt, Libya, Kuwait, Saudi Arabia, Iraq, and U.A.E in Hofstede's (1983) study. These Arab countries were found to have high power distance, low individualism scores and strong uncertainty avoidance (Hofstede, 1983). These findings create the assumption that the seven Arab countries included are similar in their cultural values and are deemed collectivistic. These results cannot be fully representative of each country separately. Conversely, Netherlands had scores of high individualism, small power distance, weak uncertainty avoidance, and feminine (Hofstede, 1983). These results assumed the homogeneity of the included cultures and labelled countries according to the mainstream culture, however, deviations from the mainstream do occur as evidenced by the existence of subcultures (Dirani, 2008). Thus, Hofstede's dimensions are simply included as a loose reference point to the national differences drawn through research

and are used to further emphasize the importance of considering individual level differences when drawing conclusions about a country or society.

The continuum of individualism / collectivism. Collectivism has been defined as "the subordination of the individual to the goals of a collective" whereas Individualism has been defined as "the subordination of the goals of the collectivities to individual goals" (Ayyash-Abdo, 2001). Collectivistic cultures tend to foster in-group goals, interdependent selves, encourage relatedness and communal relationships as well as value norms within their society (Matsumoto et al., 2008). Individualistic cultures tend to adopt personal goals, development of independent constructs of self, foster rationality and interpersonal exchange with attitudes and emotions considered to be important determinants of behavior (Matsumoto et al., 2008).

The relationship between individualism and collectivism has been uncertain and surrounded by controversy (Taras et al., 2014). Hofstede, regarded as the "father" of the construct, viewed individualism and collectivism as polar opposites on *one* continuum (meaning that low collectivism is functionally equivalent to high individualism); however, this unidimensional understanding has been challenged and now thought to be representative of two independent continua (Taras et al., 2014). This notion implies that an individual's position on the individualism continuum is independent of their position on the collectivism continuum, and so an individual could simultaneously score low (or high) on both dimensions (Taras et al., 2014). Taras et al., (2014) examined this discrepancy in construct through assessing existent established instruments of individualism-collectivism and proposed three main factors that this dimensionality may depend on: (1) the specific instrument used to collect data, (2) the cultural region from which the data is collected, and (3) the level of analysis (Taras et al., 2014). Their findings indicated a bidimensional structure was more consistent in Western and North American

samples, while a unidimensional structure was evident in Eastern samples (Taras et al., 2014). These findings are of relevance to the current study as they emphasize how cultural orientation differs across the globe, how the definition holds variances, and how the constructs of culture in Eastern regions versus the West are still not fully grounded. Thus, it is important to keep in mind the controversy surrounding the construct individualism-collectivism when drawing conclusions about individuals and their cultural orientation.

Self-Construal. The role of culture in psychological processes has been evaluated, specifically as it pertains to cultural ways of constructing the self (or self-construal) (Dwivedi & Rastogi, 2016). In their assessment of self construals across cultures, Harb and Smith (2008) describe the self as a dynamic and cognitive schema responsible for organizing psychological and social experiences whilst regulating intentional behavior and allowing the individual's effective functioning in the social world (Harb & Smith, 2008). The *self-construal* is the way in which *the self* is defined and understood by the individual, in reference to the structure of knowledge pertaining to the individual's surrounding environment (Harb & Smith, 2008). With that said, researchers such as Kitayama, Markus, Matsumoto, & Norasakkunkit (1997) propose that individuals within a cultural context develop emotional, motivational, and cognitive processes through socialization which allows for effective functioning in society (Kitayama et al., 1997). Based on the understanding of how the self regulates behavior in order to achieve effective social functioning, Harb & Smith (2008) argued that it is reasonable to assume that the way in which the self is understood in one cultural context may differ from the way in which is it understood in another (Harb & Smith, 2008).

In examining the self-construal literature, Brewer and Gardner (1996) noted contrasts in various aspects of the self and proposed a distinction between three different dimensions of the

self: (1) the personal self – which is differentiated, individuated, and characteristic of most studies in Western psychology regarding the self; (2) the relational self – where the self-concept is derived from roles in relationships with significant others; and (3) the collective self – which aligns with the concept of social identity (Harb & Smith, 2008). Using the above distinctions, Harb and Smith (2008) proposed a self-construal scale to measure different categories of the self: personal self, relational (horizontal and vertical) self, collective (horizontal and vertical) self, and humanity-bound self (which is defined by belonging to the human species as opposed to other living organisms) (Harb & Smith, 2008). The distinction between vertical and horizontal refers to emphasis placed on equality or hierarchy respectively. Researchers such as Hofstede (1980), Triandis (1995), and Shwartz (1992) have included these dimensions across their concepts to identify cultural differentiations and thus assume that they are likely to be translated at the individual level and seep into the identities and self-construals formed (Harb & Smith 2008). With that said, Harb & Smith (2008) used these groupings to test the instrument to measure self-construals through participants from Jordan, Lebanon, Syria, and the United Kingdom. Their results indicated that Arab participants maintained vertical and collective self-construals whereas the British participants maintained personal and relational-horizontal self-construals (Harb & Smith, 2008). These findings give rise to the understanding that the Arab participants emphasized hierarchy as opposed to equality, considering they held vertical self-construals (Harb & Smith, 2008). This hierarchical structure can be seen in political and military groupings. This finding is further supported by the results indicating Arab participants identified more with the collective self-construal, as this tends to involve larger groups where there are looser associations within them; here, relationships depend on inferred group characteristics, norms, and roles, as opposed to negotiated scripts (Harb & Smith, 2008). Therefore, it would be easy to conclude that

the Lebanese participants can be categorized closer to the collectivist side of the cultural spectrum when compared to their individualistic Western counterparts. However, it is important to note that the Lebanese participants scored distinctly differently as compared to the Syrian and Jordanian participants. When measuring personal and relational-horizontal self-construals, the Lebanese sample was ranked directly after the British participants, which placed the Lebanese participants somewhere in between the Syrians and Jordanians on one side, and the British on the other (Harb & Smith, 2008). Simply put, the Lebanese were recorded as more similar to the British than the other Arab samples. Conclusions drawn from this study indicate towards the self being understood differently across cultural contexts and that we cannot make generalizable conclusions easily (Harb & Smith, 2008).

Independent / Interdependent Construal. In many Western cultures, individuals are socialized to value independence, accompanied with discovering and expressing one's unique characteristics (Markus & Kitayama, 1991). In order to achieve this goal, importance is placed on understanding and organizing behaviour in reference to the individual's own internal collection of actions, thoughts, and feelings rather than referring to those of others; this forges a path to processes such as "self-actualization" and "developing one's distinct potential" (Markus & Kitayama, 1991, p. 226). Here, the conception of the self is autonomous and independent, hence it referred to as the *independent construal of the self* which would present itself most in an *individualist* context (Markus & Kitayama, 1991).

Compared to Western cultures such as North America, Canada and Western Europe, Non-Western cultures such as Asian and Latino cultures have been found to emphasize *connectedness*, as seen in the essential facet of maintaining interdependence among individuals. This entails viewing oneself as part of an encircling social relationship and identifying that one's behaviour is

reliant on what one perceives to be the actions, thoughts, and feelings of *others* in the relationship (Markus & Kitayama, 1991). Here, individuals strive to fit in with relevant others as the self is less differentiated and more connected to the social context, generally aiming to develop assorted interpersonal relationships; thus, this understanding is referred to as the *interdependent construal of the self,* most often associated with *collectivism* (Markus & Kitayama, 1991). Internal elements of this self are viewed as context-specific and so individuals holding this orientation are unlikely to undertake a dominant role in regulating overt behavior, particularly if said behavior involves significant others, rather certain characteristics must be persistently organized and structured to come to terms with the principal duty of interdependence (Markus & Kitayama, 1991).

Emotional/Psychological Interdependence. Kagitcibasi (2002) proposed a model of family change to address queries regarding the family context, with emphasis placed on understanding differences in family patterns across socio-cultural-economic contexts in addition to shedding light on the development of the self within families and societies. In the 1970s, she conducted a study on the Value of Children (VOC) and discovered the importance of psychological (love/pride/joy children give to their parents) and economic (involves children providing material benefits to their families, working while they're young, and providing security to their parents when they grow old) values ascribed to children by their parents (Kagitcibasi, 2002). Economic VOC was stronger in less affluent and rural areas, and with this realization of material VOCs differing as affected by socio-economic development, Kagitcibasi (2002) focused on differentiating these interdependencies within families thus paving the way to a new model of family change. Two existent family interaction patterns related to the individualism-collectivism dimension are presented: (1) traditional family – characterized by

material and emotion interdependence (child contributes to family while young and later on by providing old age security to parents, with their independence seen as a threat to family livelihood); and (2) individualistic model – characterized by independence (characteristic of western middle class nuclear family where individuation-separation is encouraged and social welfare provides the elderly with income/insurance thus family interdependence is unnecessary) (Kagitcibasi, 2002).

Kagitcibasi (2002) explains the "modernization theory" which holds the assumption of the family model shifting from interdependence towards independence in line with socio-economic development. However, this assumption has been questioned since closely-knit family interaction patterns continue to exist regardless of increased urbanization in collectivistic cultures (Kagitcibasi, 2002, p.3). This led to the emergence of the *family model of emotional/psychological interdependence*, where there is independence regarding the material domain alongside interdependence in the psychological domain; this translates into childrearing within these families as children are not expected to contribute materially and their autonomy is not seen as a threat since they still hold the "connectedness/relatedness" from their emotional/psychological interdependency (Kagitcibasi, 2002).

In relation to the construction of the self, within the family model of interdependence the self that develops is *related* whereas within the family model of independence, the self that develops is *separate* (Kagitcibasi, 2002). In the family model of emotional/psychological interdependence, the self that emerges is the *autonomous-related self* (demonstrating autonomy and relatedness), which is argued to be more optimal for human development since relatedness (intimacy) and autonomy are categorized as two basic human needs (Kagitcibasi, 2002).

Kagitcibasi's (2002) findings are pertinent to the present study because of its implications on the understanding of cultures and the self within societies. The model of emotional/psychological interdependence is better equipped to explain ethnic variations in family patterns and speaks to differences in the self across contexts (Kagitcibasi, 2002), seen in the recognition of cultural differences in constructing the self as well as the functional variability of the self within the same culture. This study also highlights individual differences based on variances in societies and economies, which steers away from lumping countries together under one cultural orientation.

These differentiations between interdependent / collectivist and independent / individualistic cultures have been valuable in cross-cultural research and have been of specific interest to researchers concerned with the role that culture may play in emotion regulation (Diaz & Eisenberg, 2015; Singh & Mishra, 2011; Butler, Lee, & Gross, 2007; Monteiro et al., 2014). Within psychology, emotions tend to be regarded as "a universal set of largely prewired internal processes of self-maintenance and self-regulation" (Markus & Kitayama, 1991, p. 235), however this does not signify that the emotional experience is also universal. Individuals in any given culture can vary significantly in their interdependent and independent views of the self (Zampetakis, Kafetsios, Lerakis, Moustakis, 2016). Thus, we can argue that meaning derived from emotion is a social attainment rather than an individual achievement, thus the emotional experience should differ methodically with how the self is construed (Markus & Kitayama, 1991).

Display Rules and Culture. Display rules are defined as cultural norms which dictate how to manage and modify emotions depending on social circumstances (Matsumoto et al., 2008). Matsumoto et al., (2008) explored expressivity norms involved in individualism-

collectivism, stating that there are distinct differences between the two, seen in the focus on personal feelings and free expression that is evident in individualistic societies whereas as in a collectivistic society, they are more likely to focus on groups and relationships. However, they clarified there is also within-culture variability in norms: (1) interindividual variability – individual differences in expressing norms across contexts and emotions; (2) intraindividual variability – variability within the individual across contexts and emotions (Matsumoto et al., 2008).

They targeted more than 5000 participants across 32 countries and used the Display Rule Assessment Inventory. Their findings suggested a universal norm for expressing regulation as the range of differences between the country means and interindividual differences was comparable whereas they discovered intraindividual differences within each country to be larger than the differences between individuals or countries (Matsumoto et al., 2008). Across all cultures, individuals expressed their emotions more towards in-groups more so than out-groups, thus suggesting that all societies differentiate their social interactions based on the in-group versus out-group distinction (Matsumoto et al., 2008). Contrary to their initial prediction, interindividual variability in norm expressivity was negatively associated with individualism; the greater levels of free expression associated with individualism indicates the cultural orientation is associated with a small bandwidth of expression possibilities hence the smaller interindividual variability discovered (Matsumoto et al., 2008). However, the levels of free expression associated with individualism were related to the likelihood of expressing more negative emotions towards in-groups whereas collectivistic cultures tend to sanction less expression (Matsumoto et al., 2008). Interestingly, intraindividual variability was not associated with individualism-collectivism thus suggesting that “cultures do not affect the *range* of responses

within an individual across a wide range of contexts" but rather are "associated with the *types* of responses across contexts" (Matsumoto et al., 2008, p.70).

In combination, the above findings suggest that the relationship between expression endorsement and culture differs based on the nature of the interaction (in-group versus out-group) and the overall expressivity levels specific to each cultural orientation. Furthermore, this study provides evidence for variations within cultures, as they focused on intraindividual variability, and also specifies the qualitative differences regarding emotions across cultures. Considering the present study aims to assess the relationship between emotion regulation and culture, it is imperative to distinguish between the differing aspects of culture, and in specific it's relationship with emotions, as it will allow for a more grounded exploration of it's role.

The influence of culture. Gross specifically mentioned the need to evaluate the role of culture in emotion regulation by explaining that cultural variables, such as beliefs, attitudes, and the orientation towards collectivism or individualism, would most likely inform how emotions are regulated in terms of selection and use of differing emotion strategies (Diaz & Eisenberg, 2015). Emotion regulation has been related to the individual's self-construal and to his or her goals (Zampetakis et al., 2016). This is in line with the understanding that cultures encourage and reinforce emotional responding in differing ways, which results in variances in *which* emotional responses are approved under *what* circumstances (Butler et al., 2007).

Principles within cultural orientations regarding interpersonal relationships and emotions help to foster and enforce norms concerning emotion regulation which, in all cultures, serve the purpose of maintaining social order (Matsumoto, Nakagawa, & Hee Yoo, 2008). Matsumoto et al., (2008) were interested in evaluating cultural values to explain cultural variations in emotion regulation. It was emphasized that an important function of culture is to coordinate, organize, and

maintain social order, with cultural transmission being a crucial aspect that occurs through the development of values (guiding principles that refer to desirable goals that motivate behaviour) (Matsumoto et al., 2008). There are two types of values which are specifically important in understanding emotion regulation: values related to interpersonal relationships and values related to emotions (Matsumoto et al., 2008). Values regarding interpersonal relationships include: (1) Individualism versus Collectivism (or embeddedness and autonomy) is a value orientation concerning the relationship between the individual and the in group; (2) Power Distance/Egalitarianism versus Hierarchy – cultures high on this accept the unequal power distribution and encourage self-regulation when interacting with people of a higher status, whereas cultures low on this attempt to distribute power/status evenly and encourage assertiveness and discourage self-regulation (Matsumoto et al., 2008). Values related to emotions include: (1) Uncertainty Avoidance – cultures high on this are associated with more anxiety from ambiguous situations and develop more institutions to deal with this anxiety; (2) Long versus Short Term Orientation – cultures high on this are more likely to regulate emotional reactions in order to preserve the possibility of good future relationships since they have a long term perspective on relationships; and (3) Affective Autonomy – degree to which cultures protect the individual's independent quest of positive experiences (Matsumoto et al., 2008).

In studying the abovementioned cultural values in relation to emotion regulation strategies, their findings revealed reappraisal was negatively correlated with Uncertainty Avoidance and Power Distance whilst egalitarianism, embeddedness, and hierarchy (values related to interpersonal relationships) were highly correlated with suppression (Matsumoto et al., 2008). This suggests that cultures which value the solidarity of the group and maintenance of social order had higher suppression associations since suppression of emotional responses may

be necessary in order for the person to consider the most appropriate emotional response (Matsumoto et al., 2008). Furthermore, suppression was negatively correlated with values related to emotions such as affective autonomy and long-term orientation; such results suggest that suppression may hold positive effects within the society or cultural system related to ingroups or hierarchies, contrary to the negative consequences usually associated with this form of emotion regulation (i.e. anxiety, stress, memory impairments, more negative emotion) (Gross & John, 2003; Matsumoto et al., 2008).

Emotion regulation has been identified as a predictor of intercultural adjustment, its importance seen in the ability to control negative emotions when faced with stress or conflict (considered inevitable in inter/intracultural life) (Yoo, Matsumoto, & LeRoux, 2006). Yoo et al., (2006) studied emotion regulation in relation to intercultural adjustment in a sample of international university students across three timepoints during the school year. Participants were from Asia (China, India, Korea, Japan, Turkey, Taiwan), Central America (Brazil, Mexico), and Europe (Germany, UK, France); their results suggested that emotion regulation played an independent role in intercultural adjustment as the results showed less anxiety reported and predicted better adjustment concurrently, and in the future (Yoo et al., 2006). Although this study clearly described the ethnicity of the international students, it did not distinguish between the types of emotion regulation strategies used and so we cannot isolate the effectiveness of each strategy in relation to the various cultures.

Ultimately, a person's well-being has been shown to be affected by the way a person regulates their emotion; it becomes paramount to determine why people use particular strategies, and how different emotion regulation strategies impact upon well-being (Haga, Kraft, & Corby.,

2009). In a study by Haga et al. (2009), cognitive reappraisal was associated with more positive affect, enhanced life satisfaction and lower levels of negative affect and depressed mood; whereas suppression was associated with a more depressed mood, lower life satisfactions levels and positive affect. These findings supported the hypothesis that effective emotion regulation strategies provide the path to enhanced wellbeing levels (Haga et al., 2009). However, it is important to mention that Haga et al's., (2009) study looked at country level differences specifically and drew conclusions based on this distinction. This is problematic because literature has pointed to expected differences in outcomes of emotion regulation when taking culture into consideration. Although these findings provide some understanding of emotion regulation and it's predicted outcomes, the results are not supported in Eastern and specifically Asian cultures (Singh & Mishra, 2011). Chen, Hastings, Rubin, Chen, Cen, and Stewart (1998) discovered that expressive suppression in Chinese children was linked to high psychosocial adjustment as well as peer acceptance, with these positive results being incongruent with findings from a sample of Canadian children (Chen et al., 1998). These above findings in combination shed light on the cultural differences regarding the use of either emotion regulation strategy.

Literature on the direct research of expressive suppression suggests that this emotion regulation strategy may achieve a wide range of social functions, occur more frequently, and be associated with less negative outcomes in Asian cultures as compared to Western / European ones (Butler et al., 2007). Butler, Lee, and Gross (2007) explain that the values of independence and self-assertion found in Western cultures encourage open expression while directing the use of suppression primarily to self-protective acts of withdrawal when facing a social threat (Butler et al., 2007). However, expressive suppression has been shown to hold prosocial functions, for example hiding glee when winning against a peer in a competitive game or suppressing anger

with a friend in order to preserve the relationship (Butler et al., 2007). With that said, Butler, Lee, and Gross (2007) have suggested that Asian values (i.e. interdependence, relationship harmony) may encourage suppression equally for these prosocial goals as well as during positive social interactions, rather than attributing it solely to self-protective purposes (Butler at el., 2007). A study of Chinese American children supported this view by showing that the use of suppression in response to peer stressors reduced the association between stress and dysphoria for low-acculturated children but not for high-acculturated children (Butler at el., 2007). Therefore, it was concluded that the emotion regulation strategy of expressive suppression was considered as an effective coping strategy for the children that had retained their Chinese heritage orientation when compared to those that had adopted the more mainstream American culture (Butler at el., 2007). Zampetakis et al., (2016) note that there is evidence for the use of suppression in collectivistic cultures more so than in individualistic cultures – this was highlighted in their study targeting undergraduate students from Southern Greece where they assessed their emotional experience of entrepreneurship using the emotion regulation question (ERQ) and the Self-Construal Scale (SCS) (which are both included in the methodology of this study) (Zampetakis et al., 2016). Results indicated positive correlations between cognitive reappraisal and an independent self-construal, as well as a negative correlation between the independent self-construal and suppression (Zampetakis et al., 2016). This finding is specifically pertinent to the current study as it targets self-construals and their relationship with emotion regulation strategies, as opposed to focusing on culture as a broad topic. Diaz and Eisenberg (2015) studied the potential role of culture in emotion regulation and concluded that expressive suppression, usually associated with negative psychological effects (higher levels of negative affect) is less debilitating in collectivist cultures as well as for individuals with bicultural European / Asian

values, when compared to individualist cultures (Diaz & Eisenberg, 2015). However, Singh and Mishra (2011) explain that the research data gathered regarding differences in emotion regulation in recent years has been mostly obtained from Western cultures, therefore there is a need to examine non-Western cultures in order to determine whether the affective implications are culture-specific or universal (Singh & Mishra, 2011).

Most research conducted in this area focuses on comparisons between Asian samples (collectivist) and samples from the United States or Europe (individualist), with vast amounts of understanding and awareness being gained (Ayyash-Abdo, 2001). However, findings from these geographic areas cannot be generalized across the world and so, more research is required in order to understand and conceptualize differences in cultures. Several issues have been identified as being problematic in cross-cultural psychology. A relevant concern is that of broad generalizations: "culture-as-a-system" overgeneralizations stem from grouping certain aspects or attributes of a group and presenting it as a reflection of the characteristic of the group (Poortinga, 2015). This glosses over the importance of individual level differences and does not account for the variations amongst sub-groups, considering different ethnographies within the same population tend to show few similarities (Poortinga, 2015). Moreover, populations are usually distinguished based on countries or regions (E.g. Western, East Asian), assuming homogeneity within the populations (Poortinga, 2015). It is necessary to question whether values present similarities or differences in their structures at both the individual and country level, since failing to address such a question could lead to inaccurate conclusions being drawn in comparative research (Fischer & Poortinga, 2012).

In reference to the earlier mentioned study by Harb and Smith (2008) which concluded that Lebanon could be considered as holding a predominantly collectivistic orientation, it is

necessary to describe where Lebanon stands on the spectrum of individualism-collectivism. Lebanon is geographically located as a crossroad link between the Mediterranean with Asia and Europe thus giving rise to a multicultural heritage and cosmopolitan character, deeming it as "Arab colored by Western influences, mainly French and American." (Ayyash-Abdo, 2001, p. 505). Considering this make up, it is imbalanced to solely categorize Lebanon into either an Asian Collectivistic or Western Individualistic orientation. Rather, emphasis should be placed on how multicultural societies foster a combination of cultural values and while it may be reasonable to assume that most individuals share mutual values and characteristics, dispositional characteristics are not all esteemed to the same extent across cultures or even within the same culture (Diaz & Eisenberg, 2015). In addition, it is important to note that when referring to individualism-collectivism, there is an underlying assumption that the member of a specific society is uniformly individualistic or collectivistic (Ayyash-Abdo, 2001). However, it has been suggested that these cultural orientations can be considered as multidimensional as opposed to polar opposites; an individual can be high on one and low on the other, with emphasis placed on both tendencies (individualistic and collectivistic) co-existing within cultures and individuals (Taras et al., 2014; Ayyash-Abdo, 2001). This recognition of intragroup variation allows for a more specific understanding of an individual's culture and its influence.

All in all, the body of literature presented above supports emotion regulation as vital in perceiving and managing stress and has shown to differ depending on cultural factors such as self-construals. Furthermore, age and gender have shown to be important variables to consider and will both be controlled for. The population of university students has been of interest to researchers lately with Yeh et al., (2001) describing their interest due to the crucial developmental tasks the population faces (Yeh et al., 2001). It was specifically emphasized that

several cultural aspects would affect the development of Asian college students, including their sense of self and identity formation (Yeh et al., 2001). With that said, the Lebanese university student population isn't considered Asian nor Western and could benefit from further understanding of their emotion regulation strategies and their perceived levels of stress and wellbeing as compared to Western counterparts. This also provides an opportunity to create prevention and intervention programs for the unique population of university students, present counselors and therapists with the tools and understanding of cultural differences in order to be fully equipped in aiding these students, and create better awareness of the underlying processes and mechanisms in dealing with stress.

Context of the present study

Lebanon maintains a cosmopolitan character due to its geographical location as a crossroad linking Asia and Europe with the Mediterranean; the population is almost four million and is comprised of three main religions: Christians, Muslims, and Druze (Ayyash-Abdo, 2001). Lebanon has been described as having a unique intimate connection between politics, religion, and demography (Faour, 2007). Divisions across and within religions prevail in Lebanese societies, broken down into 18 sects mostly belonging to the two large clusters: Muslims and Christians (Faour, 2007). Religion in Lebanon is said to not just be the function of individual preference reflected through worship, but rather it often determines political and social identification, with sects playing a fundamental role as they are considered the "primary social organization through which political security has been maintained" (Faour, 2007, p. 909; Ayyash-Abdo, 2001). The official language is Arabic although government documents are written in both Arabic and French, and students are required to learn a second and sometimes even third language in the school system (Ayyash-Abdo, 2001). Based on the *one* census conducted in 1932

under the French mandate, government positions were split up according to demographic size; Maronites, being the largest sect, held the highest position (President of the Republic), Sunnis being the second largest received the premiership positions, and Shiites were allocated the Speaker of Parliament position (General Assembly) (Faour, 2007). Socioeconomic and political factors may affect the demographic sizes recorded in the 1932 census and considering the distribution of positions in power, groups with changing sizes may demand a revision of the existing division of power within the government (Faour, 2007). This could be problematic for the groups that have grown smaller and are unwilling to relinquish their power and privileges, or for smaller groups having grown bigger and demanding a revision of power distribution; to avoid this persistent problem becoming public knowledge, the Lebanese government adopted an undeclared policy stating the refusal to publish any demographic data related to religious groups (Faour, 2007). This may keep political and religious conflicts at bay, however, this lack of demographic data has shown to be problematic when trying to estimate an accurate representation of the Lebanese population. The abovementioned point to the nature of Lebanon as possessing multiple groups (religious, political, social), being multi-lingual, and thus implicitly multi-cultural (Ayyash-Abdo, 2001). Therefore, it is unfounded to assume that individual differences do not exist within such a diverse population.

There are few existent studies assessing Lebanon's culture such as Ali, Taqi, and Krishnan (1997) proposing that Arab countries, including Lebanon, are collectivists with regards to their orientation and are committed to the group (immediate family, extended family, or work group) (Ali, Taqi, Krishnan, 1997). Religion in Lebanon was studied by Ayyash-Abdo (2001) and was found to contribute towards the differences in cultural orientation, where Muslims were shown to be more collectivistic (possibly due their attendance at a place of worship, which

satisfies communal goals) (Ayyash-Abdo, 2001). However, this country and region is still considered understudied, with most of these findings dating back 20 years. Dirani (2008) investigated a Lebanese sample and their views on individualism-collectivism, obtaining scores indicating towards Lebanese participants being more individualistic; these findings suggest that the Lebanese population view themselves differently than how others view them, and an explanation for the contradictory results was attributed to Lebanon becoming more individualistic over the 25 years, since the earlier studies were conducted (Dirani, 2008). Furthermore, studies examining cultural orientations in the Arab world report aggregate findings from all these countries which may be inaccurate. In further support of this finding, Harb and Smith (2008) studied self-construals in a sample of Lebanese, Syrian, Jordanian, and British participants. Interestingly, their findings indicated to Lebanon being categorized somewhere in between the Arab participants (Syria & Jordan) and the British (Harb & Smith, 2008). When studying the dimensions of self-construals, the Lebanese participants ranked directly after the British sample in regard to personal and relational-horizontal self construals (Harb & Smith, 2008). This indicates that Lebanon cannot be included with other Arab countries as being collectivistic simply because it is considered an Arab country.

As for the counterpart to the Lebanese population, the current study utilizes a student sample from the Netherlands. As Hofstede investigated cultural differences, it was concluded that the Dutch society was classified as being high in individualism (Oppenheimer, 2004). The Netherlands is a Western European country and their recorded individualistic cultural orientation will function as the Western counterpart for this study. However, the Netherlands has an interesting history of multi-culturalism that is worth touching upon. Since the 1960s, several minority groups (immigrants from former colonies such as Moluccas in Indonesia, refugees, and

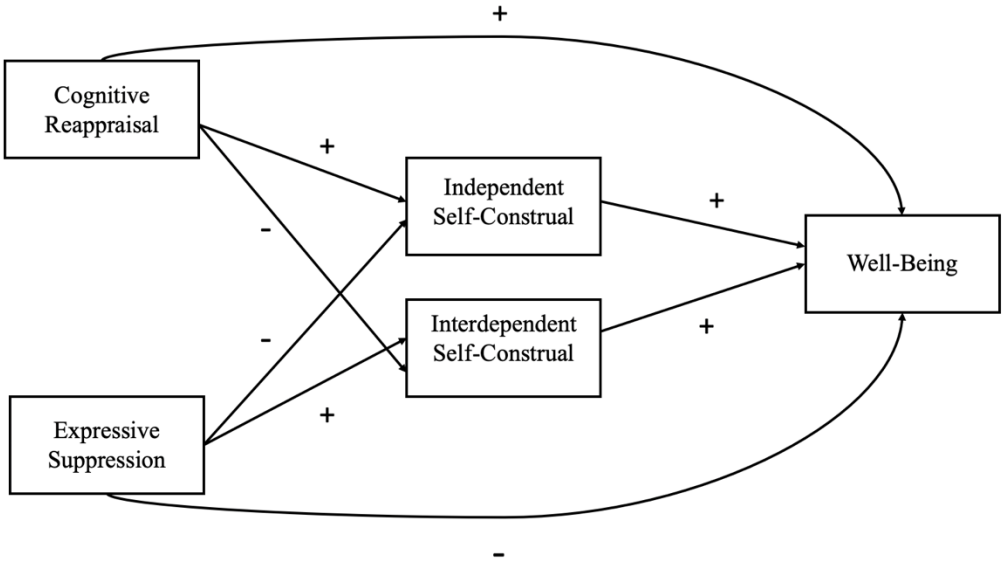
guest workers from Turkey and Morocco) have settled in the Netherlands and continued to reside there (Van der Veen, I., Meijnen, G., 2000). As a result of the complex and sustained inflow of ethnicities, Netherlands has altered its once high level of ethnic homogeneity towards a more diversified status (Vasta, 2007). However, focus on this diversity has shed light on the understanding that these immigrants have absorbed the national beliefs and ideals of the country and hold strong ties to the Dutch language and culture (Van der Veen et al., 2000). For the purpose of this study, Dutch born and raised participants were recruited during data collection to ensure an accurate representation of the cultural ideals and beliefs maintained within the society.

As mentioned earlier, the two samples within the present study hold similarities seen through our access to a student population in private universities (this points to homogeneity in the sample as it is not representative of the earlier described complex multigroup context), the Western influence, emphasis on English as a language, and the specified age group of 18 and above. These points are mentioned in order to avoid viewing the present study as a comparison study that does not account for the intricate multigroup context as well as individual / intergroup variations. Keeping these descriptions in mind, it is imperative for cross-cultural research to reflect on the continuum that individualism-collectivism falls on when drawing conclusions about different countries or regions. This is applicable to the Western populations, and even more so to the under-researched Eastern region.

With that said, below are the hypotheses for the present study as well as the hypothesized model. It is expected for self-construals to predict the emotion regulation strategy employed which then predicts expected well-being and perceived stress levels, however, the nature or weight of the relationships between the variables is unclear for the Lebanese sample and so the current study aims to investigate and determine the paths involved. This is due to the lack of

research specifically targeting the exact nature of Lebanon's culture orientation; previous studies have lumped Lebanon in with other Arab countries as being collectivistic, however considering the multi-culturalism evident amongst the various groups within the society (Ayyash-Abdo, 2001), we are unable to categorize Lebanon as solely collectivistic thus unable to precisely determine the nature of the expected relationships between self-construals, well-being, stress, and emotion regulation. That said, the weight of the relationships between the variables for the Dutch sample has been supported by evidence in the literature showing the population to be viewed as individualistic, hence maintaining an independent self-construal.

Path Model and Hypotheses



Hypothesis one. Participants who use suppression as an emotion regulation strategy will experience lower wellbeing as measured by the GHQ and higher stress levels as measured by the PSS.

Hypothesis two. The use of reappraisal as an emotion regulation strategy will be associated will increased levels of wellbeing as measured by the GHQ and lower levels of stress as measured by the PSS.

Hypothesis three. The use of reappraisal as an emotion regulation strategy will be positively related to the endorsement of an independent self-construal.

Hypothesis four. The use of reappraisal will be negatively related to the endorsement of interdependence as a self-construal.

Hypothesis five. The use of suppression as an emotion regulation strategy will be negatively related to the endorsement of an independent construal of the self.

Hypothesis six. The use of suppression as an emotion regulation strategy will be related to the endorsement of an interdependent view of the self.

Hypothesis seven. Participants who endorse an independent self-construal will experience less stress as measured by the PSS and increased levels of wellbeing as measured by the GHQ.

Hypothesis eight. Participants who endorse the interdependent self-construal will experience more stress as measured by the PSS and lower levels of wellbeing as measured by the GHQ.

Hypothesis nine. Participants who endorse reappraisal as an emotion regulation strategy and hold an independent self-construal will report increased levels of wellbeing as assessed by the GHQ and lower levels of stress as assessed by the PSS.

Hypothesis 10. Participants who endorse suppression as an emotion regulation strategy and hold an independent self-construal will report lower levels of wellbeing as assessed by the GHQ and higher levels of stress as assessed by the PSS.

Hypothesis 11. Individuals who endorse suppression as an emotion regulation strategy and hold an interdependent self-construal will report better wellbeing levels as measured by the GHQ and lower levels of stress.

Hypothesis 12. Lebanese students will fall in the middle on the independent and interdependent self-construals.

The model and hypotheses presented above hold for both samples in this study (Lebanon and Netherlands). Based on the literature provided, the current study is considering the Netherlands as a Western and Individualistic society, so the Dutch sample is expected to support hypotheses one through 11. Due to the uncertainty surrounding Lebanon's cultural orientation, we are unsure of the exact weight or nature of the relationships between the variables and so this study aims to explore this using the model above and draw more grounded conclusions from the findings. In addition, there is a need to mention the aforementioned understanding of cultural orientation (individualism / collectivism, independent / interdependent self-construals) being considered on a continuum. Individuals in any given culture are able to considerably vary in their interdependent / independent self-construals (Zampetakis, 2016).

Methodology

The purpose of this study was to assess how emotion regulation (reappraisal and suppression) predict perceived stress levels and overall wellbeing in a sample of university students in Lebanon and the Netherlands as moderated by self construals.

Design and Procedure

The study employed a quantitative survey design. In this case, the aim was to assess the interplay between emotion regulation strategies and cultural orientation (through self-construals), which in turn is expected to predict perceived stress levels and overall well-being.

In both countries non-random convenience sampling was applied and only participants ranging between the ages of 18 and 25 were included in this study. Participants younger than 18 years of age were excluded as they would require parental consent. Participants were required to fill a sociodemographic form which included stating their age and year of university, as well as a consent form which specified that only students 18 years old and above may participate. In the online survey, there was an added filter requiring the participants to indicate their age; students responding as being under 18 were guided to the end of the survey. As for the paper-based survey, participants were verbally asked if they were over 18 years old, which was also stated again in the consent form. The specified age group of 18-25 is considered to be reflective of the transitional and developmental period university students face due to their experiences and unique pressures (i.e. moving away from their families, increase in workload, taking on differing responsibilities).

Participants were asked to fill out a series of demographic questions regarding their gender, age, type of student (e.g. freshman), ethnicity/nationality, place of birth, and parent's nationality in addition to a measure of emotion regulation, stress, wellbeing, and two measures of self-construals as the six fold self-construal scale by Harb and Smith (2008) has not been used in the

context of emotion regulation; hence to establish convergent validity a well-established self-construals scale that yields two as opposed to six dimensions was applied (all scales were presented in counterbalanced order).

Data was gathered from Lebanon using both online and paper and pencil methods. While an online link was used in the Netherlands. Participants were first presented with an informed consent page, followed by a demographic form and the five questionnaires being administered in counterbalanced order. Using an electronic form of data collection is advantageous for it's low cost and wide access regardless of geographical location (Christensen et al., 2011), however, there is the disadvantage of inability to ensure the intended participant is answering the questions and isn't consulting with peers thus creating an error in the data collected. Furthermore, a drawback of using online methods is the associated low response rate, especially in Lebanon. To overcome this obstacle, the present study ensured that the questionnaires were kept short, and simple to increase the chances of responses provided. Indicating the confidentiality and anonymity of the study may further increase the response rate. In addition, Dutch participants recruited from Tilburg were given extra credit.

Upon completion of the questionnaires, there were instructions provided, through the debriefing letter, should the students want to contact the researcher through the email provided for any questions or concerns they may have.

The sample size needed to run the analysis for the current study was 400, out of which 345 participants were recruited in total. The sample size was calculated based on assumptions of a path analysis. In path analysis, four parameters are estimated based on the expected relationship between endogenous and exogenous variables (γ), the expected relationship between endogenous variables (β) and errors for endogenous variables. These are variances of exogenous variables (n

= 4), error variance of endogenous variables (n = 3), direct effects (n = 8) and double headed arrows (n = 4). This brings to a total of 19 parameters. Based on recommendations by Kline (1998) of 20 participants per parameter, the present study targeted a minimum of 19*20 = 380 participants (Wolf, Harrington, Clark, & Miller, 2013).

Participants

A total of 153 participants were recruited using paper and pencil surveys from Lebanon. The majority of students were recruited from Haigazian University in Beirut through convenience sampling. Class instructors were approached for permission to access classes and distribute surveys for on the spot completion. Students were also approached on campus. Students from the general population were also recruited where youth were approached in cafes across the Hamra area in Beirut and asked if they were currently enrolled and willing to participate. The majority of the participants were female (76.5%), with a mean age of M = 21(SD = 2.35), and registered Lebanese nationality (92%).

A total of 206 participants were recruited from the Netherlands using an online version of the survey powered by Qualtrics. Fourteen participants were excluded from the study due to not providing consent and / or being younger than 18 years of age; this left a total of 192 participants. An undergraduate psychology student pool was sampled from Tilburg University in the Netherlands and the majority of the participants were female (84.9%), with the mean age of M = 19 (SD = 2.06), and of Dutch nationality (92%).

Table 1

Socio-demographic Information

	Lebanese Sample N (%)	*Dutch Sample N (%)*
Gender		
Males	35 (22.9)	27 (14.1)
Females	117 (76.5)	163 (84.9)
Age (Mean; Standard Deviation)	21.3 ; 2.35	19 ; 2.06
Nationality		
Lebanese	141 (92.2)	
Dutch		178 (92.7)
Dual Nationality	28 (18.3)	
Other	11 (7.3)	9 (4.7)
Mother's place of birth		
Lebanon	126 (82.4)	
Netherlands		167 (87%)
Other:	26 (17)	24 (12.5)
Mother's highest education level		
No schooling completed	6 (3.9)	3 (1.6)
Nursey school to 8th grade	6 (3.9)	3 (1.6)
9th, 10th, or 11th grade	17 (11.1)	2 (1)
12th grade, no diploma	7 (4.6)	5 (2.6)
High school graduate	25 (16.3)	37 (19.3)
Diploma or equivalent	11 (7.2)	82 (42.7)
Some university, < 1 year	8 (5.2)	3 (1.6)
1 or > years of university, no degree	14 (9.2)	1 (0.5)
Bachelor's degree (BA,BS)	45 (29.4)	29 (15.1)
Master's degree (MA, MS, MBA)	8 (5.2)	19 (9.9)

Professional degree (MD)	2 (1.3)	5 (2.6)
Doctorate degree (PhD)	3 (2)	2 (1)
Father's highest educational level		
No schooling completed	8 (5.2)	3 (1.6)
Nursey school to 8th grade	13 (8.5)	3 (1.6)
9th, 10th, or 11th grade	18 (11.8)	2 (1)
12th grade, no diploma	4 (2.6)	1 (0.5)
High school graduate	11 (7.2)	35 (18.2)
Diploma or the equivalent	12 (7.8)	70 (36.5)
Some university, but < 1 year	6 (3.9)	
1 or > years of university, no degree	13 (8.5)	5 (2.6)
Bachelor's degree (BA,BS)	34 (22.2)	30 (15.6)
Master's degree (MA, MS, MBA)	21 (13.7)	28 (14.6)
Professional degree (MD)	4 (2.6)	6 (3.1)
Doctorate degree (PhD)	8 (5.2)	6 (3.1)
Father's place of birth		
Lebanon	134 (87.6)	
Netherlands		166 (86.5)
Other:	18 (11.8)	23 (12)

Ethical considerations

Ethics approval was sought and granted from the Haigazian University Department of Social and Behavioral Sciences ethics committee, and the Ethics Review Board of the School of Social and Behavioral Sciences at Tilburg University. Informed consent forms were provided for each participant. The form explained that the participants have the right to withdraw from the study should they feel the need to do so. It also included the purpose of the research and provided an explanation as to how the gathered results will be used. A debriefing letter (attached in the Appendix) for each participant was included at the end of the survey, explaining the aim and purpose of the study and providing the means to contact the researchers should any participant have questions / concerns regarding their participation.

Materials

Participants were asked to fill out a series of demographic questions regarding their gender, age, type of student (e.g. freshman), ethnicity/nationality, place of birth, and parent's nationality in addition to a measure of emotion regulation (ERQ), stress (PSS), wellbeing (GHQ), and two measures of self-construals (SCSS; SCS).

Emotion Regulation Questionnaire (ERQ). Gross and John (2003) are responsible for the distinct separation between two strategies of emotion regulation, dividing them into antecedent-focused (cognitive reappraisal) or response-focused (expressive suppression) (Gross & John, 2003). In their experimental work, they chose to explore these strategies thus developed a questionnaire that would accurately assess these processes. They coined it the Emotion Regulation Questionnaire (ERQ). Considering the present study is utilizing Gross and John's (2003) designated distinctions, the established questionnaire was used to assess the differences in emotion regulation strategies amongst the university students since the constructs (cognitive reappraisal

and expressive suppression) maintain the same operational definition in their theory as their developed tool.

The ERQ consists of 10 items which participants are required to respond to using a Likert scale ranging from 1 (strongly agree) to 7 (strongly disagree) (Gross and John, 2003). The items have been divided into 6 that assess cognitive reappraisal, and 4 that assess expressive suppression (Gross and John, 2003). Reliability of the questionnaire was gaged using Cronbach's alpha, which yielded an average of $\alpha = .79$ for the cognitive reappraisal questions and an average of $\alpha = .73$ for the expressive suppression items (Gross and John, 2003). Test-retest reliability across 3 months generated a result of .69 for both scales (Gross and John, 2003). Convergent and divergent validity were tested for by examining the relationships of reappraisal and suppression in the ERQ in relation to the Big Five Personality dimensions; the results indicated -.20 and -.41 betas which showed that the ERQ measures converged with the personality dimensions but did not duplicate (Gross and John, 2003). Reliability was tested within the present study using Cronbach's alpha, which yielded scores of $\alpha = .87$ for the cognitive reappraisal items and $\alpha = .76$ for the expressive suppression items within the Lebanese sample. The Dutch sample yielded scores of $\alpha = .80$ for the reappraisal items and $\alpha = .79$ for the suppression items.

Perceived Stress Scale (PSS). The Perceived Stress Scale (PSS) is a popularly used tool to measure psychological stress in a self-report manner; it evaluates the degree to which the individual feels like their life has been unpredictable, uncontrollable and/or overloaded (Lee, 2012). There are three versions of the PSS: (1) the original PSS-14 is a 14-item scale and was developed in English with 7 positive items and 7 negative items rated on a 5-point Likert scale; (2) the PSS-10 which is the shortened version using factor analysis; and (3) the four-item PSS-4 introduced as a brief version for situations that require a very short scale e.g. telephone interviews

(Lee, 2012). A review of 19 articles related to the psychometric properties of the PSS provided an overall conclusive thought regarding the tool. Cronbach's alpha was utilized as a measure of internal consistency reliability and across 12 studies, the PSS-10 was evaluated at >.70 while the reported Cronbach's alpha for the PSS-4 was <.70 in half of the studies in which it what evaluated in (Lee, 2012). This may be due to the fewer number of items on the PSS-4 since Cronbach's alpha tends to increase with the number of items within the instrument (Lee, 2012). Furthermore, a correlation coefficient (Pearson's) was used to evaluate the test-retest reliability which showed the PSS-10 reporting >.70 across the 4 studies assessing it (Lee, 2012). Overall, the PSS has been empirically validated with populations of mainly college students and in addition, the psychometric properties of the PSS-10 version are superior to those of the PSS-14 and PSS-4, deeming the PSS-10 more advisable to measure perceived stress in both research and practice (Lee, 2012).

Reliability was tested for within the present study using Cronbach's alpha, which yielded scores of $\alpha = .79$ and $\alpha = .89$ for the Lebanese and Dutch samples respectively.

Sixfold Self-Construal Scale (SSCS). The SSCS is a flexible instrument holding the purpose of measuring the level of connectedness of an individual to specific groups in their environment, with the degree of association being an indicator regarding an independent or an interdependent self-construal (Harb & Smith, 2008). The SSCS is rated on a 7-point Likert Scale with anchors of "*to a very small extent"* ranging to "*to a very large extent"*. It contains 5 core items that are repeated in order to assess the individual's self-construal across each of the six dimensions: personal-level, relational-horizontal level, relational-vertical level, collective-horizontal level, collective-vertical level, and humanity-level (Harb & Smith, 2008). In total, the scale contains 30 items. To test the validity of the SSCS, Harb and Smith (2008) administered their

30-item scale to a cross-cultural sample of 170 British students, 227 Lebanese students, 232 Syrian students, and 226 Jordanian students. Examining the relationships between the six different levels of self- construal with related concepts from other scales allowed for evidence of concurrent validity; consistent results were found with the expected relationships. For example, when correlated with the Schwartz Value Scale, values like self-direction, achievement, and power correlated most strongly with the personal-level self-construal; conformity correlated most strongly with the relational-vertical level self-construal; and universalism correlated most strongly with the humanity level (Harb & Smith, 2008). Samples from each of the subscales yielded satisfactory Cronbach's alpha reliabilities ranging from .70 to .92, except for the Personal subscale scores of Jordanian participants, which was recorded at .68.

Cronbach's alpha was used to test internal consistency within the present study. Reliabilities were good for subscales of both the Lebanese (Family α = .84, Friends α = .81, Students in department/faculty α = .86, Social grouping α = .73, Humanity in general α = .81, and Personal α = .80) and Dutch samples (Family α= .84, Friends α = .79, Students in department/faculty α = .80, Social grouping α = .78, Humanity in general α = .78, and Personal α = .84).

Singelis Self-Construal Scale (SCS). The SCS was developed to measure the constellation of feelings, thoughts, and actions which comprise independent and interdependent self-construals (Singelis, 1994). Initially, the scale consisted of 45 items which were then narrowed down to the items deemed most useful in measuring the two dimensions of self-construals (Singelis, 1994). After a second round of analysis using an oblique (promax) rotation to verify item selection, a total of 24 items remained (12 for each factor); 6 additional items were included in order to improve internal reliabilities of the original scale thus making the total number of items 30 (Singelis, 1994).

The SCS is rated on a 7-point Likert Scale with answers ranging from 1 (strongly disagree) to 7 (strongly agree).

Cronbach alpha reliabilities for the two subscales was recorded as $\alpha = .70$ for independent items and $\alpha = .74$ for interdependent items (Singelis, 1994). Face validity was deemed high as the items focused directly on the characteristics which define the constructs: for example, the item "My happiness depends on the happiness of those around me" assesses the respondent's connectedness with others, which is a central concept in the interdependent self (Singelis, 1994). Measures of construct reliability were numerously replicated and tested by comparing results of Caucasian Americans and Asian Americans (Chinese, Filipino, Japanese, Korean); the differences between the groups were consistent with Markus and Kitayama's characterizations of North Americans as independent and Asians and interdependent, with high scores indicating a stronger self-construal (Singelis, 1994).

Cronbach's alpha was used to test for reliability within the present study, with reported scores of $\alpha = .73$ for the independent subscale and $\alpha = .67$ for the interdependent subscale in the Lebanese sample. The Dutch sample reported values of $\alpha = .77$ for the independent subscale and $\alpha = .74$ for the interdependent subscale.

The General Health Questionnaire (GHQ). The General Health Questionnaire (GHQ) is a measure of psychological distress devised for population studies (Hamer, Stamatakis & Misra, 2010), and has been validated for use across a wide range of samples in differing cultural and social settings (Graetz, 1991). The survey inquires about general level of happiness, experiences of depressive/anxiety symptoms, and sleep disturbance; each item is rated on a four-point Likert scale ranging from 1 (more so than usual) to 4 (much less than usual) (Hamer et al., 2010).

Cronbach's alpha was used to assess reliability within the present study and yielded satisfactory results of $\alpha = .83$ and $\alpha = .86$ for the Lebanese and Dutch samples respectively.

Language of Administration

All of the questionnaires involved were translated into Arabic by applying a combined back translation procedure and committee approach. Both the Lebanese and the Dutch samples were given the choice of responding in either English or Arabic through the online version of the survey (a drop-down box was provided, where the participant selected their language of choice before beginning the survey). One Lebanese participant chose to respond in Arabic using the online version, while all Dutch participants responded in English. Lebanese participants that were approached to answer using the paper and pencil methods were verbally asked if they preferred to respond in Arabic or English and were provided with the survey written in their language of choice. Three Lebanese participants chose to answer the paper and pencil version of the survey in Arabic.

Data analysis

Data from the Dutch and Lebanese samples were entered using IBM SPSS. Descriptive statistics were applied to describe both samples, independent samples, paired samples and one-sample t-tests were generated to examine differences on the study scales across both samples. The Pearson's Product Moment correlation coefficient was used to assess convergent validity of the Sixfold Self-Construal Scale (Harb & Smith, 2008) against the Singelis Self Construal Scale (Singelis, 1994). The main model presented in Figure 1, was tested across the Lebanese and the Dutch samples separately using path analysis on AMOS whilst examining the influence of independent / personal and interdependent / collective vertical self construals on emotion regulation and stress / wellbeing. An independent samples t-tests was applied to evaluate sex

differences on all scales. Based on the results, no differences emerged ($p > .05$) thus sex was not added as a control variable in the main model.

Results

Preliminary analysis

Prior to analysis the data was checked for accuracy of entry and missing values. Within the Lebanese data, missing values were found on the SCS scale, ranging from 0.7% to 2%; the GHQ ranging from 0.7% to 1.3%, and the SSCS scale (0.7%). Within the Dutch data Missing values were found only on the SCS scale and they ranged from 0.5% to 1%, Considering the aforementioned percentages did not exceed 5% within each scale, the missing values were not assessed as an issue that could bias the model and Expectation Maximization (EM) was used to replace them (Tabachnick & Fidell ,2012).

Univariate outliers were checked using standardized scores (z-scores) and all values exceeding the absolute value of +/-1.96 were considered outliers significant at the 95th confidence interval. Within the Lebanese dataset, a total of five outliers were found on the ERQ reappraisal subscale, four on the ERQ suppression subscale, six on the interdependent SCS subscale, six on the independence SCS subscale, three on the GHQ scale, and two on the PSS scale. A total of 26 outliers were found across the six SSCS subscales. As for the Dutch dataset, a total of four outliers were found on the ERQ reappraisal subscale, five on the ERQ suppression subscale, five on the interdependent SCS subscale, 10 on the independence SCS subscale, four on the GHQ scale, and four on the PSS scale. A total of 27 outliers were found across the six SSCS subscales. Given that within any normal distribution, 5% of cases are expected to fall outside of the +/- 1.96 range. In calculating 5% of the sample sizes for both Lebanese (N = 156) and Dutch samples (N = 192), results indicated that the number of outliers per scale should not exceed 7.8 (rounded up to 8) and 9.6 (rounded up to 10) respectively. Considering none of the scales held a number of outliers

exceeding these cutoffs, we can view the model of this present study as fairly accurate. The table of outliers is included in the Appendix.

Normality of the data for all continuous variables was checked through the standardized skew statistics. Within the Lebanese dataset, the SSCS subscale of "family" was skewed as the standardized z statistic was z= - 5.69, and the SSCS subscale of "myself" was skewed as the standardized z statistic was z= - 7.20, measured according to the absolute value of +/- 3.29 significant at the 99.99% confidence interval. Within the Dutch dataset, the SSCS subscale of "family" was skewed as the standardized z statistic was z= - 4.06, and the SSCS subscale of "friends" was skewed as the standardized z statistic was z= - 5.91, measured according to the absolute value of +/- 3.29 significant at the 99.99% confidence interval. While the central limit theorem states that as sample size becomes larger (usually defined as being greater than 30) the sampling distribution is assumed to have a normal shape (Field, 2013), it is more applicable to samples that use random selection and are representative of the population. As such, bootstrapping was applied throughout given it is robust in situations where normality is violated (Field, 2013).

Convergent validity of the Sixfold Self-Construal Scale (SSCS)

To evaluate convergent validity, the Pearson Product moment's correlation coefficient was generated between the The SSCS subscales and their conceptual equivalents within the SCS subscales. This was to evaluate whether both scales measured cultural orientation in parallel. Within the Lebanese model, the independent subscale on the SCS scale correlated with the "personal" subscale on the SSCS scale (r = .388, p = .01). The "family", "social grouping", "humanity in general", and "students in my department/faculty" SSCS subscales significantly positively correlated with the SCS interdependence subscale (r = .350, p = .01; r = .347, p = .01; r = .216, p = .01; r = 261; p = .01). Within the Dutch model, the independent subscale on the SCS

scale correlated with the "personal" subscale on the SSCS scale (r = .357, p = .01). The "family", "friends", and "social grouping" SSCS subscales significantly positively correlated with the SCS interdependence subscale (r = .312, p = .01; r = .201, p = .01; r = .199, p = .01). The "students in the department/faculty" and "humanity in general" SSCS subscales, significantly correlated with the SCS interdependence subscale (r = .157, p = .05; r = .182, p = .05). The "personal" SSCS subscale was negatively significantly correlated with the SCS interdependence subscale (r = -.191, p = .01). Although in both samples, the correlations are significant, they range from small to a moderate effect (Field, 2013). To further evaluate the psychometric properties of the two scales for an informed decision on whether the SSCS is suitable for use in the current study, Confirmatory Factor Analyses were run on both within the Lebanese and the Dutch samples alike.

Factor structure of the SSCS and the SCS

A Confirmatory factor analysis (CFA) was conducted on both the Sixfold Self-Construal Scale (Harb & Smith, 2008) and the Singelis Self-Construal Scale (Singelis, 1994) sing AMOS. Through this process, we tested whether a simple five factor model structure fits the Lebanese and Dutch data separately for the SSCS and a simple two factor structure fits the two samples separately for the SCS. We examined the Root Mean Square Residual (RMR) which represents the mean residuals associated with the model variance covariance matrix to the data variance covariance matrix with a cutoff of .05 or less for an acceptable model; the Goodness of Fit (GFI) and Adjusted Goodness of Fit Indexes which measure the amount of variance and covariance in the data accounted for by the hypothesized model with the AGFI adjusting for the degrees of freedom in the model with values closer to 1 indicating good fit, the Comparative Fit Index (CFI) which compares the hypothesized model against the data while adjusting for sample size with values of .95 and above considered as acceptable ; and the Root Mean Square Error of

Estimation (RMSEA) which analyzes discrepancies between the hypothesized model and the population covariance matrix with values of .06 and less considered indicative of acceptable fit (Bentler, 1990; Bentler, 1992; Hu & Bentler, 1999).

The SSCS tool within the Lebanese model in the present study showed poor fit indices (RMR = .330, > .05; CFI = .682 < .95; GFI = .627 < .9, AGFI = .572 < .9; RMSEA = .113 > .06). Similar results were noted within the Dutch sample (RMR = .170 > .05; CFI = .695 > .95; GFI = .630 < .9; AGFI = .559 < .9, RMSEA = .118 > .06). The SCS tool comparatively had better fit indexes although still not optimal in both the Lebanese (RMR = .159, > .05; CFI = .848 < .95; GFI = .840 < .9, AGFI = .803 < .9; RMSEA = .042 > .06) and the Dutch samples (RMR = .136, > .05; CFI = .846 < .95; GFI = .843 < .9, AGFI = .805 < .9; RMSEA = .049 > .06).

Based on the aforementioned model fit indexes, and given the conceptualization of independence and interdependence in the current study as elaborated in the literature review, we opted to use the SCS as opposed to the SSCS. The SCS therefore, remains as the measure of interdependent and independent self-construals used to assess cultural orientation within the present study.

Descriptive statistics

Descriptive data for the Lebanese sample and the Dutch sample (Table 2) are provided below in addition to results of a series of independent samples t-tests comparing the two samples on the relevant measures. The main analysis section elaborates on the fit of each path model, alongside the related direct and indirect effects observed between the variables of interest.

Table 2

Descriptive Statistics of Lebanese and Dutch Samples

	Lebanese sample					Dutch sample					
	N	*M*	*SD*	*Min*	*Max*	*N*	*M*	*SD*	*Min*	*Max*	*P*
Emotion Regulation											
Reappraisal	153	4.96	1.03	2.33	7	192	4.61	1.08	1.83	6.67	*0.002*
Suppression	153	3.72	1.37	1	7	192	3.64	1.19	1	7	*0.58*
Stress	153	2.13	0.6	0.7	3.8	192	2.03	0.71	0.3	3.4	*0.159*
Singelis Self-Construal											
Interdependent	153	4.69	0.59	3.07	5.93	192	4.49	0.61	2.67	5.8	*0.002*
Independent	153	5.08	0.67	3.07	6.87	192	4.64	0.68	2.67	6.53	*0.000*
General Health	153	1.19	0.52	0.25	2.5	192	2.17	0.51	1	3.42	*0.000*
Sixfold Self-Construal											
My Family	153	5.62	1.14	2	7	192	5.37	1.13	2.2	7	*0.041*
My Friends	153	5.22	1.02	2	7	192	5.37	0.89	1	7	*0.15*
Students	153	3.02	1.28	1	6.6	192	3.31	0.99	1	6.4	*0.02*
Social Grp.	153	3.74	1.39	1	6.4	192	3.63	1.29	1	6.8	*0.456*
Humanity	153	4.43	1.19	1.2	7	192	3.88	0.96	1.2	6.4	*0.000*
Myself	153	5.78	1.07	1.6	7	192	5.4	1.07	1.6	7	*0.001*

Results show that students from Lebanon and the Netherlands use reappraisal frequently as indicated by average scores that fell significantly above the scale midpoint of four ($t(152) = 11.54$, $p = .000$ and $t(191) = 7.787$, $p = .000$ respectively). The Lebanese sample had a significantly higher mean on reappraisal ($M = 4.96$, $SD = 1.03$) compared to the Dutch sample ($M = 4.61$, $SD = 1.08$) indicating to a more frequent use of the strategy ($t(343) = 3.083$, $p = .002$, $r = .16$). The suppression strategy was used less frequently in both samples as indicated by averages that fell significantly below the scale midpoint of four ($t(152) = -2.547$, $p = .012$ within the Lebanese sample and $t(191) = -4.167$, $p = .000$ within the Dutch sample) with no significant differences across the Lebanese ($M = 3.72$, $SD = 1.37$) and the Dutch ($M = 3.64$, $SD = 1.19$) samples ($t(343) = .554$, $p = .580$). In both samples the use of reappraisal was reported as higher compared to suppression as indicated by a paired sampled t-test (Lebanon: $t(152) = 8.764$, $p = .000$; Netherlands $t(191) = 8.573$, $p = .000$). Stress was moderately evaluated in both samples with ($M = 2.13$, $SD = .60$ in the Lebanese sample and $M = 2.03$, $SD = .71$ in the Dutch sample) indicating that both student samples report experiencing stressors some of the times with no significant differences observed across the two ($t(343) = 1.411$, $p = .159$). On overall wellbeing as assessed by the GHQ, Lebanese students reported significantly lower scores pointing to better overall psychological wellbeing and lower distress ($M = 1.19$, $SD = .52$) as compared to Dutch students ($M = 2.17$, SD= .51; $t(343) = -17.448$, $p = .000$, $r = -.68$). Interestingly, Lebanese students scored slightly and significantly ($t(343) = 6.043$, $p = .000$, $r = .34$) higher ($M = 5.08$, $SD = .67$) on the independence subscale of the SCS compared to Dutch students ($M = 4.64$, $SD = .68$). As expected, on the interdependence subscale, Dutch students scored slightly and significantly ($t(343) = 3.117$, $p = .002$, $r = .16$) lower ($M = 4.49$, $SD = .61$) compared to Lebanese students ($M = 4.69$, $SD = .59$). In both samples, the independent self-construal was endorsed significantly more in comparison to

the interdependent self-construal (Lebanon: $t(152) = 5.405$, $p = .000$; Netherlands: $t(191) = 2.115$, $p = .036$).

Main analysis

Hypotheses one through 11 were evaluated by testing the path model elaborated in Figure 1 separately among Lebanese (Figure 2) and Dutch students (Figure 3).

Figure 2

Lebanon path model

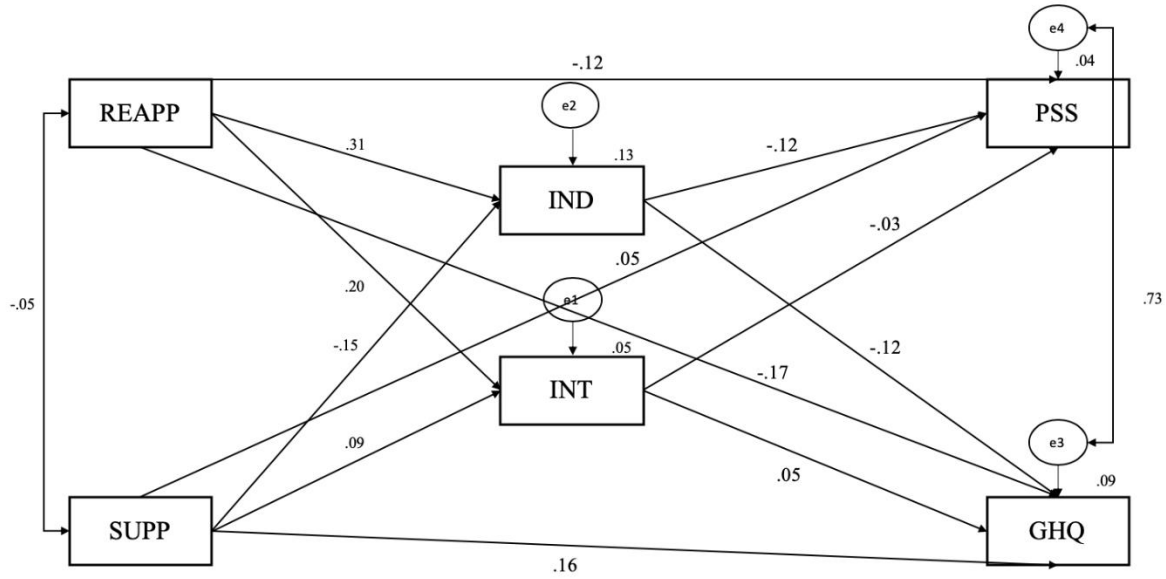
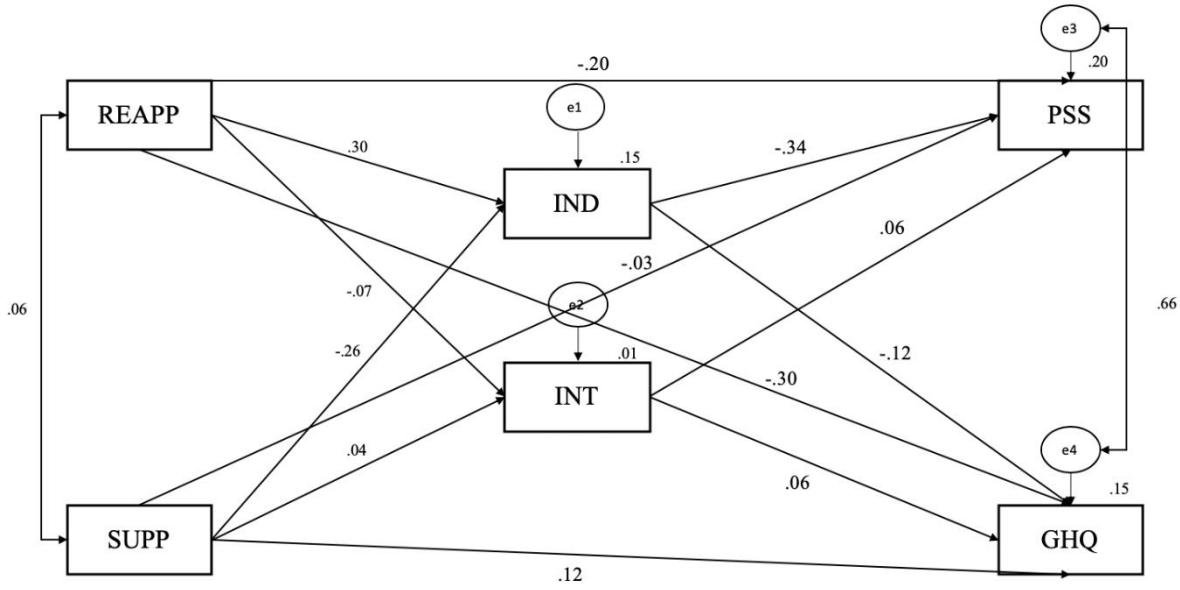


Figure 3

Netherlands path model



Model fit. Fit indexes applied to evaluate the factor structures of the SSCS and SCS were also examined to evaluate the model fit to the two sets of data. The Lebanese data was associated with good fit indexes across the board showing that the hypothesized model is rather stable (RMR = .04, < .05; CFI = 1.00 > .95; GFI = .999 > .9, AGFI = .980 > .9; RMSEA = .00 < .06). Results for the Dutch data were mixed with most fit indexes falling within their acceptable ranges except for the AGFI and RMSEA (RMR = .018, < .05; CFI = .967 > .95; GFI = .987 > .9, AGFI = .717 < .9; RMSEA = .19 > .06).

Direct Effects. To address hypotheses one through eight, direct effects were examined. *Hypothesis one* stated that participants who use suppression as an emotion regulation strategy will experience lower wellbeing and higher stress levels. Upon examining standardized regression weights, none of the associations were found to be significant in both Lebanese (stress β =.05, p =.722; wellbeing β =.16, p =.079) and Dutch students (stress β =-.03, p =.681; wellbeing β =.12, p =.123). As such hypothesis one was not supported.

Hypothesis two stated that the use of reappraisal as an emotion regulation strategy will be associated will increased levels of wellbeing and lower levels of stress. By evaluating the standardized regression weights, the hypothesis was fully supported within the Dutch sample (stress β =-.20, *p* =.013; wellbeing β =-.30, *p* =.01) and partially supported within the Lebanese sample (stress β =-.12, *p* =.272; wellbeing β =-.17, *p* =.025) such that a significant direct effect was noted for wellbeing only and not stress.

Hypothesis three noted that participants who use reappraisal as an emotion regulation strategy will endorse an independent self-construal. In both samples this was supported with significant direct effects (Lebanese students β =.31, *p* =.01; Dutch students β =.30, *p* =.01). *Hypothesis four* stated that reappraisal will negatively predict interdependence, an expectation that was not supported both the Dutch (β = -.07, *p* =.337) and Lebanese samples (β = .20, *p* =.019). However, and contrary to the expectation, a significant positive association emerged for the Lebanese sample indicating that participants who use reappraisal also endorse an interdependent self-construal as they do an independent one.

As per *hypothesis five*, it was expected that the use of suppression as an emotion regulation strategy will be negatively associated with an independent construal of the self. While the direct effect within the Dutch sample was significant (β = -.26, *p* =.01), it was marginally significant within the Lebanese sample (β = -.15, *p* =.058). As such, the hypothesis was partially supported. Suppression as an emotion regulation strategy however was expected to be endorsed by those who hold an interdependent view of the self *(Hypothesis six)*. This was not supported in both samples with non-significant direct effects (Lebanese students β = .09, *p* =.329; Dutch students β = .04, *p* =.680).

Hypothesis seven stated that participants who endorse an independent self-construal will experience less stress and increased levels of wellbeing while *hypothesis eight* stated that an endorsement of the interdependent self-construal will be associated with an opposite pattern characterized by increased stress and lower wellbeing. Upon examining the standardized regression weights of the purported direct effects for both H7 and H8, all were non-significant within the Lebanese sample, indicating that the endorsed self-construal whether independent or interdependent does not directly predict wellbeing (independent β = -.12, p =.138; interdependent β = .05, p =.585) or stress (independent β = -.12, p =.22; interdependent β = -.03, p =.739) in the expected direction. Hypothesis eight was also not supported in the Dutch sample (stress β = .06, p =.517; wellbeing β = .06, p =.536) while hypothesis seven was partially supported with the endorsement of the independent self-construal predicting lower levels of stress (β = -.34, p =.01) but not wellbeing β = -.12, p = .177) among Dutch students. Therefore, in both samples, hypothesis eight was not supported and hypothesis seven was supported partially within the Dutch sample only.

Indirect Effects. Hypotheses nine through 11, were tested by calculating the indirect effects of emotion regulation on wellbeing and stress through self-construals. While no indirect effects were found within the Lebanese sample, significant indirect effects emerged within the Dutch sample. Results showed that Dutch students who used cognitive reappraisal as an emotion regulation strategy and held an independent self-construal had significantly lower levels of stress (β = -.099, p = 0.001) with no bearing on wellbeing. This finding therefore, partially supports *hypothesis nine.* Another indirect effect emerged, supporting *hypothesis 10* such that Dutch students who endorse expressive suppression as an emotion regulation strategy and hold an independent self-construal reported increased levels of stress (β = 0.089, p = 0.002).

One sample t-test. To address *hypothesis 12*, a one sample t-test was conducted to examine whether the average endorsement of independent and interdependent self-construlas among the Lebanese students is significantly different from the scale midpoint of four coded as "neither agree nor disagree". Results showed that for both independent ($t(152) = 19.947$, $p = .000$) and interdependent self-construals ($t(152) = 14.366$, $p = .000$) the Lebanese sample scored significantly above the scale midpoint. It seems therefore that the sample endorses both these self-construals but a paired samples t-test showed a significantly higher endorsement of the independent self-construal ($t(152) = 5.405$, $p = .000$, $r = .40$) (See Table 2 for averages). As such hypothesis 12 was partially supported with an endorsement of both self-construals prevalent in the sample with a higher tendency towards independence which challenges expectations on what a non-Western Arab sample should look like on this cultural dimension, supporting the need to more closely and prudently examine the descriptor of culture within non-WEIRD samples.

Discussion

The overall aim of the present study was to assess how emotion regulation strategies (cognitive reappraisal and expressive suppression) predicted psychological wellbeing and stress in a sample of university students from the Netherlands and Lebanon as moderated by independent and interdependent self-construals. A survey design with convenience sampling was applied to collect data from both Lebanese and Dutch University students. Two main research questions were addressed: 1) How does the use of an emotion regulation strategy (reappraisal and suppression) predict wellbeing, through self-construals (independent / interdependent), in university students in Lebanon as Compared to the Netherlands? 2) Where on the continuum of independent and interdependent self-construals will Lebanese students fall?

In addressing these questions, a theoretical model was constructed and tested in both the Lebanese and Dutch samples (See Figure 1) with 11 hypothesized pathways. It is noteworthy that expectations with regards to cross-country differences were not drawn given the paucity of empirical work addressing how cultural constructs of independent and interdependent self-construals manifest within the Lebanese context. To that effect, expectations with regards to the Lebanese sample were based off of the available literature that seems polarized in its focus in terms of characterizing cultures as either or (Ali et al., 1997; Dirani, 2008).

Emotion Regulation Strategies, Stress, and Wellbeing

As per hypothesis one, we expected that the use of suppression would predict negative wellbeing and increased stress levels in both samples. Our findings showed that in general, both the Lebanese and Dutch samples reported significantly higher endorsement of cognitive reappraisal as an emotion regulation strategy and both samples reported similar minimal use of expressive suppression but in both samples the strategy was not associated with decreased

wellbeing or increased perceived stress. This is not aligned with previous research specifically as it relates to the Dutch sample. For instance in a study evaluating antecedents and outcomes of the use of suppression and reappraisal, in three Western contexts (United States, Australia and Norway), suppression was associated with negative wellbeing indexes (Haga, Craft & Corby, 2009). Similar findings were also noted among Italian adolescents such that suppression predicted negative wellbeing outcomes (Verzeletti, Zammuner, Galli & Agnoli, 2016). While such studies seem to support that suppression may be detrimental to the wellbeing of individuals, at least within Western cultural contexts, an experimental study challenges this notion by demonstrating that suppression has no effect on mood regulation (Kalokerinos, Greenaway, & Denson, 2015). The study replicated the same findings in two experiments with adequate power, with the null findings on suppression challenging the assumption of a link between the said emotion regulation strategy and wellbeing. This means that in some situations deemed appropriate (e.g. suppressing the expression of joy during a funeral) suppression can be applied to manage the expression of an emotion without necessarily playing a detrimental function on wellbeing and positive emotions in general (Kalokerinos, Greenaway, & Denson, 2015). One of the possible explanations as it relates to the lack of associations noted in the present study is the lack of distinction between negative and positive emotions in our present study. For instance, in one study, it was found that suppression did not predict depressive symptoms among Singaporean Americans when the expressed emotions were positive and deemed socially inappropriate such as pride. Contrary to this, the link was significant among European Americans. For positive emotions deemed socially acceptable such a link was not noted for both samples (Su, Lee, & Oishi, 2013). Perhaps, the assessment of emotion regulation vis a vis more specific emotions would have yielded different results.

Both the Dutch and Lebanese samples reported similar perceived levels of stress and wellbeing: Lebanese participants reflected slightly higher results on the measure of stress as compared to their Dutch counterpart, whereas the Dutch sample reported slightly less stress but also lower levels of wellbeing. Overall, both samples reflected moderate scores on these measures. Keeping in mind the earlier results of the preferred use of cognitive reappraisal, we can argue that both samples presented moderate amounts of stress, as opposed to higher levels, due to their choice of emotion regulation strategy; such results provide support for *hypothesis two - the use of reappraisal as an emotion regulation strategy will be associated will increased levels of wellbeing as measured by the GHQ and lower levels of stress as measured by the PSS* - and are in line with the literature mirroring more efficient and beneficial outcomes associated with cognitive reappraisal (Gross & John, 2003; Mauss et al., 2007; Singh & Mishra, 2011). However, it is also important to examine the lower levels of wellbeing reported by the Dutch sample – perhaps this is an indication of the levels of responsibility the average Dutch university student has to face. Research has shown that change in sleeping habits, vacations / breaks, change in eating habits, new responsibilities and an increased workload are among the five most frequently recorded stressors (Heckert et al., 2008), however, perhaps we need to explore the qualitative differences between the responsibilities that the average Dutch university student may face in comparison to the Lebanese. In Lebanon, it is more likely that a university student still lives at home with their family and is not responsible of maintaining a job alongside their education; whereas the average Dutch university student may have to navigate multiple obligations, which may explain the difference across the samples in reported wellbeing levels. Furthermore, although the average Lebanese student may not face the same responsibilities, more light needs to be shed on the contexts of stressors explored and the nature of said stressors.

The present study's findings in relation to the Lebanese sample reporting slightly higher levels of stress may be in line with a deeper understanding of the society being explored. In reference to the descriptions of Lebanon's complex and intricate social make up (religion and politics defined as social identity (Ayyash-Abdo, 2001)), perhaps we need to spend more time exploring the nature of the stressors in relation to the complexities of this society and delve further into whether said stressors can be effectively managed through reappraisal in order to lower the perceived stress levels; perhaps there are differing mechanisms at play within this context, which aid in managing the individuals emotions and reactions to stressors. In addition (this argument is expanded on further in the limitations section to follow), it is imperative to keep in mind that the specified sample pool within the present study may be considered as homogenous (seen through Western influence and being a private university thus representative of a specific group of individuals) and thus is not representative of all university students across Lebanon or the Netherlands – the sample pool may not provide a well encompassed view of the nature of the stressors, the differing responsibilities, and the interplay of these variables. Thus, we must view these results whilst keeping in mind differences could arise when exploring differing university student groups (i.e. public universities, religiously affiliated universities).

In addition, perhaps the present study's results on perceived levels of stress are influenced by the factor of age. Previous literature has put forth the relationship between emotion regulation strategies and perceived levels of stress, with findings pointing towards individuals managing their emotions better as their age increases. Myers et al., (2012) explored the relationship between perceived levels of stress in psychology graduate students in relation to self-care practices. Within this study, age was shown to predict levels of stress in that less perceived stress was reported by older students (Myers et al., 2012). Earlier developmental

research by Zimmer-Gembeck & Skinner, (2011) focused on children and adolescents and has proposed that as individuals mature, they in turn expand their coping capacities (Monteiro et al., 2014). It seems that older individuals may have established more effective ways of coping thus reporting a lesser amount of daily hassles and consequently perceiving less stress (Myers et al., 2012). In the present study, the Lebanese sample (mean age = 19) and the Dutch sample (mean age = 21) were of similar age yet we cannot assume the same level of stressors or emotion regulation strategies, it fair to note a difference between the fresh undergraduate student versus the senior graduating student. Perhaps in line with the aforementioned literature we can understand that older individuals are better able to effectively manage their stress. Monteiro et al., (2014) discovered that age significantly predicted usage of more problem-focused strategies – specifically that the older students in their sample tended to alter the meaning of a stressful situation once it was encountered (Monteiro et al., 2014). This alteration of meaning of a stressful situation is the core aspect of cognitive reappraisal prominently found in both of our samples within the present study. Keeping in mind that the present study's aim was to specifically explore the target group of university students due to its unique transitional period, perhaps the variable of age can be included in future research in order to expand the conclusions drawn and ascertain the level to which age can be considered an influencing factor.

***Emotion Regulation Strategies*.** As mentioned, both samples reported similar results in terms of emotion regulation strategies as they both reported more use of cognitive reappraisal and minimal use of expressive suppression. However, it is interesting to note that the Lebanese sample reported a significantly higher mean on cognitive reappraisal as compared to their Dutch counterpart – this was an unexpected result and it indicates more frequent use of the strategy. In the coming sections, more details specific to the interplay of culture and emotion regulation

strategies will be included but it is necessary to touch upon this particular point: previous literature, in line with our hypotheses, expected the Dutch sample to not only endorse cognitive reappraisal as an effective strategy, but also to report higher averages in comparison to the Lebanese sample, where pervious literature lacked in providing a stable stance on the cultural reasoning behind such a result. Thus, this was one of the interesting results to emerge from our analysis and leaves us with room for questions: what could lead to the Lebanese sample reporting a high average? When compared to the Dutch sample, what difference (or similarities) could explain this finding? Our findings and the existent literature point towards the influence of an individualistic cultural orientation, where focus is placed on personal goals rather than those of the collective (Matsumoto, 2008). However, could the aforementioned qualitative differences in responsibilities amongst the Lebanese and Dutch youth explain this difference? As Lebanese students take on the personal journey of university, accompanied by its unique transitional nature, perhaps this could lead to prioritizing themselves (rather than their families or over-arching community) thus indicating the more frequent use of cognitive reappraisal. Perhaps relevant to this finding is Harb and Smith's (2008) conceptualization of self-construals where Lebanese youth have been found to endorse personal and relational-horizontal self-construals, ranking directly after the British participants, and somewhere in between Syrian and Jordanian students on one side, and the British on the other.

Emotion Regulation and Self Construals

The present study aimed to assess the relationship between emotion regulation strategies and cultural orientation, whilst attempting to isolate differing aspects of the construct in order to draw sound conclusions based on theory alongside empirical evidence. Based on such, we chose to isolate self-construals as a measure of the cultural component and strayed from

being constrained to the earlier works presenting culture on a unidimensional continuum of individualism / collectivism (Hofstede, 1983). In addition, this study used referred to the facets of individualism and collectivism in order to provide detailed background knowledge of the existent understanding of culture. Mainly, the present study has utilized self-construals as a measure of individual level differences and does not claim to measure culture in general, nor does it aim to categorise people into the earlier dichotomy we are trying to stray from.

In line with the literature, it was expected that the use of reappraisal as an emotion regulation strategy will be positively related to the endorsement of an independent self-construal and negatively with an interdependent self-construal *(Hypotheses three and four)*. While the expected association was supported between the use of reappraisal and an endorsement of an independent self-construal in both samples, the negative association with interdependence was not supported. However, an interesting finding did emerge among Lebanese students. Significant positive associations were reported for the Lebanese sample in relation to both self construals, indicating that participants who use reappraisal more frequently, endorsed *both* an independent and interdependent self-construal. In further sections, the emerging results for both samples related to culture will be explored in more detail but this finding is specifically thought-provoking as we have seen previous literature focus on a strict divide between either emotion regulation strategy and the self-construal it is to be associated with - Zampetakis et al., (2016) note that there is evidence for the use of suppression in collectivistic cultures more so than in individualistic cultures. Perhaps this particular finding can shed light on the function of reappraisal and its flexibility across cultural orientations. With the Lebanese sample flagging significant associations with both self-construals, perhaps this is a call to further evaluate the context when using either strategy. Would suppression be more beneficial in a setting related to

prioritizing the needs of others regardless of cultural orientation (similar to findings reported by Su et al. 2013)?

The use of suppression as an emotion regulation strategy was negatively related to the endorsement of an independent construal of the self in the Dutch sample *(Hypothesis five)* as expected based on the earlier classification of the Dutch sample as being high in individualism (Oppenheimer, 2004), thus less likely to opt for using suppression. This finding was also evident within the Lebanese sample but only marginally, which indicates the discovered endorsement of both self-construals for the Lebanese sample. The use of suppression as an emotion regulation strategy did not predict an endorsement of an interdependent view of the self in both samples *(Hypothesis six)*. This makes sense for the Dutch sample considering the aforementioned results of their endorsement of reappraisal and an independent self construal. However, we also saw that the Lebanese sample reported an endorsement of *both* independent and interdependent self-construals – Previous literature suggests that cultures which value the solidarity of the group and maintenance of social order had higher suppression associations since suppression of emotional responses may be necessary in order for the person to consider the most appropriate emotional response (Matsumoto et al., 2008). However, this does not seem to be the case for the Lebanese university students which makes us question the weight that each cultural orientation places on the individual's interactions.

Independent and Interdependent Self-Construals. Both Dutch and Lebanese participants reported higher averages on the measure of independence, as compared to interdependence. This has been linked to an individualistic orientation since importance is placed on understanding and organizing behaviour in reference to the individual's own internal collection of actions, thoughts, and feelings rather than referring to those of others - here, the conception of the self is

autonomous and independent, hence it referred to as the independent construal of the self which would present itself most in an individualist context (Markus & Kitayama, 1991). Such a result was expected from the Dutch sample as literature has concluded that the Dutch society is classified as being high in individualism (Oppenheimer, 2004). However, this was an unexpected result for the Lebanese population, especially when we note that the Lebanese sample scored *slightly and significantly higher* than the Dutch sample. Previous literature has put forth an argument stating that Lebanon is considered collectivistic (Ali, Taqi, Krishnan, 1997), whilst more recent literature stated a differing perspective - Dirani (2008) investigated a Lebanese sample and their views on individualism-collectivism, obtaining scores indicating towards Lebanese participants being more individualistic. The Lebanese sample's high scoring results on the independence subscale within the present study are in line with Dirani's (2008) conclusion of viewing Lebanon as leaning closer to maintaining individualistic tendencies. This will be evaluated further in the last section, which focuses on where the Lebanese sample falls on the continuum of culture.

On the other hand, it was surprising to see that both the Dutch and Lebanese populations yielded similar scores on the interdependence subscale – both target populations reported slightly lower means on the interdependence subscale as compared to the independence subscale. Compared to Western cultures such as North America, Canada and Western Europe, Non-Western cultures such as Asian and Latino cultures have been found to emphasize *connectedness*, as seen in the essential facet of maintaining interdependence among individuals. This entails viewing oneself as part of an encircling social relationship and identifying that one's behaviour is reliant on what one perceives to be the actions, thoughts, and feelings of *others* in the relationship (Markus & Kitayama, 1991). Here, individuals strive to fit in with relevant others as

the self is less differentiated and more connected to the social context, generally aiming to develop assorted interpersonal relationships; thus, this understanding is referred to as the *interdependent construal of the self,* most often associated with *collectivism* (Markus & Kitayama, 1991). Internal elements of this self are viewed as context-specific and so individuals holding this orientation are unlikely to undertake a dominant role in regulating overt behavior, particularly if said behavior involves significant others, rather certain characteristics must be persistently organized and structured to come to terms with the principal duty of interdependence (Markus & Kitayama, 1991). For the Lebanese population, it was expected to discover results related to some interdependent identification – religion in Lebanon is said to not just be the function of individual preference reflected through worship, but rather it often determines political and social identification, with sects playing a fundamental role as they are considered the "primary social organization through which political security has been maintained" (Faour, 2007, p. 909; Ayyash-Abdo, 2001). Given the literature describing social identification in Lebanon, we can see the concept of religion as a driving factor related to collectivistic tendencies seen in social organization. Perhaps the specified age group of university students need to be particularly in terms of religious views, identification, and ritualistic adherence. The Lebanese sample's low scoring results on the interdependence subscale indicate a lesser connection to the collectivistic tendencies of social group loyalty and thus provide further support in viewing the sample as leaning towards individualistic tendencies. It is important to note that the present study specified the sample of university students due to their specific connection with stress levels and so perhaps future research can be directed at exploring differing age groups in order to discover if the broader Lebanese population holds closer ties to their social grouping and thus emphasizes higher collectivistic tendencies.

However, the results of interdependence for the Dutch sample are not far off that of the Lebanese. This leads to discussing a specific theory put forth by Kagitcibasi (2002), which the present study will use as a prominent anchor in interpreting the aforementioned self-construal results. Kagitcibasi (2002) proposed a model of family change to address queries regarding the family context, with emphasis placed on understanding differences in family patterns across socio-cultural-economic contexts in addition to shedding light on the development of the self within families and societies. Two existent family interaction patterns related to the individualism-collectivism dimension are presented: (1) traditional family – characterized by material and emotional interdependence (child contributes to family while young and later on by providing old age security to parents, with their independence seen as a threat to family livelihood); and (2) individualistic model – characterized by independence (characteristic of western middle class nuclear family where individuation-separation is encouraged and social welfare provides the elderly with income/insurance thus family interdependence is unnecessary) (Kagitcibasi, 2002). Exploring these interaction patterns led to the emergence of the *family model of emotional/psychological interdependence*, where there is independence regarding the material domain alongside interdependence in the psychological domain; this translates into the childrearing within these families as children are not expected to contribute materially and their autonomy is not seen as a threat since they still hold the "connectedness/relatedness" from their emotional/psychological interdependency (Kagitcibasi, 2002).

In relation to the present study, perhaps we can use the above-mentioned theory to understand the results showing the more prominent leaning towards independent self-construals and individualism, whilst still reporting a relatively moderate pull towards interdependence and collectivism. Rather than focusing on drawing separate distinctions between cultural orientation,

Kagitcibasi's (2002) theory merges the individualistic tendencies seen in the need for personal autonomy whilst maintaining the emotional connectedness and relatedness prevalent within collectivistic societies. This allows for us to look at the results of the present study through a different lens – both the Lebanese and Dutch sample responded with scores that fall in line with emotional dependence yet still strive for personal independence. In relation to the construction of the self, within the family model of interdependence the self that develops is *related* whereas within the family model of independence, the self that develops is *separate* (Kagitcibasi, 2002). In the family model of emotional/psychological interdependence, the self that emerges is the *autonomous-related self* (demonstrating autonomy and relatedness), which is argued to be more optimal for human development since relatedness (intimacy) and autonomy are categorized as two basic human needs (Kagitcibasi, 2002).

It would be interesting to explore older generations and investigate whether such results are specific to the university population which is characterized as encountering many changes in their lives, including moving away from home to attend university, having to meet certain academic expectations, as well as managing differing interpersonal and environmental changes (Monteiro et al., 2014). Perhaps the need for autonomy emerges from the physical separation from parents yet also fosters the need for emotional dependence due to the multiple changes the population faces during this particular period of their lives.

Self Construals, Stress, and Wellbeing

The endorsement of the independent self-construal did not contribute to better wellbeing and decreased stress among Lebanese students as postulated by *hypothesis seven.* This indicates that the individual's endorsement of either self-construal does not directly predict their stress or wellbeing. This too is an interesting finding because most of the literature which exists about

Lebanon and its cultural orientation is conflicting and convoluted, especially when we must explore the best way to measure such a multi-faceted culture – thus, is this the focal point of Lebanon and our sample? Our earlier findings indicated moderate amounts of stress that were shown to be effectively managed through using reappraisal, perhaps there are differing coping mechanisms that are at play within this society and the cultural component is not the largest contributing factor. This paper touches upon the complexities of differing sects, religions, politics, and such within Lebanon – maybe culture isn't the mechanism behind maintaining adequate wellbeing and stress levels. Not only has the present study put forth an understanding of Lebanon's culture that contradicts previous literature (Ali et al., 1997; Dirani, 2008), it has also provided a need to explore culture's mode of influence and role a little differently.

Instead, *hypothesis seven* was partially supported in the Dutch sample, and we explored this in earlier findings as we commented on the interplay between independence and reappraisal alongside the expected positive result. Nevertheless, the endorsement of an independent self-construal does not seem to benefit their wellbeing levels. As stated above, could this be tied to a differing type of responsibilities the Dutch youth is more likely to face? Perhaps the nature of the issues affecting wellbeing levels cannot be addressed solely through the cultural scope.

In both the Lebanese and Dutch samples, *hypothesis eight* - Participants who endorse the interdependent self-construal will experience more stress and lower levels of - was not supported. This makes sense when we keep in mind the array of results relative to endorsing an independent self-construal in both samples, as well as the noted efficiency of reappraisal in managing stress. Although both samples did report support for an interdependent self-construal, the pull for independence was greater and seems to have more of an influence of stress and wellbeing levels as compared to interdependence.

Self Construals Predicting Emotion Regulation, Stress, and Wellbeing

In exploring the three main variables within this study, two significant indirect effects within the Dutch sample emerged from our analyses. No significant indirect effects were found within the Lebanese sample. Indirect effects measured the relationship between the three variables whilst considering one of the variables, our indicator of cultural orientation / self-construal identification, as a moderating variable.

Hypothesis nine was found to be partially supported in the Dutch sample. It is the first indirect effect, which presented a significant negative relationship between stress, cognitive reappraisal, and independent self-construals. Keeping in mind the aforementioned results, we arrived at the conclusion that the Dutch sample can be classified as holding closer ties to individualistic tendencies (Oppenheimer, 2004), which falls in line with the literature describing the expected use of cognitive reappraisal when an individual holds an independent self-construal (Zampetakis et al., 2016). This indirect effect mirrors the existing results and holds implications of reappraisal being considered as an effective emotion regulation strategy, reflected in the lower levels of perceived stress. However, important to note is that the results had no bearing on wellbeing specifically. We are able to form a general picture of wellbeing through the perceived stress results (considering none of the findings points towards alarming levels of high stress or shockingly low wellbeing levels in either sample) and we can concur that the Dutch sample's individualistic cultural orientation, measured through the independent self-construal, effectively moderated the relationship between stress and emotion regulation.

Hypothesis 10 was supported within the Dutch sample and describes our second indirect effect. This result indicates that the use of expressive suppression as an emotion regulation strategy is not as effective when compared to cognitive reappraisal, seen in the significant

positive relationship between suppression and perceived stress levels: this finding implies that the more an individual uses suppression, the higher their stress levels will be. In addition, this finding is confirmed in existing theories within the literature: Butler, Lee, and Gross (2007) explain that the values of independence and self-assertion found in Western cultures encourage open expression while directing the use of suppression primarily to self-protective acts of withdrawal when facing a social threat (Butler et al., 2007). Western cultures value independence as well as expression of one's unique characteristics (Markus & Kitayama, 1991), therefore it makes sense for the Dutch sample to present results indicating lesser efficacy of suppression in relation to perceived stress levels.

Hypothesis 11 was not supported in either sample. This is due to the lack of endorsement of an interdependent self-construal, considering both samples reported significant pulls towards independence. In line with literature, and the present study's results, suppression does not seem to be the strategy of choice once an individual is in line with an independent self-construal – as is the case with both samples.

Where do Lebanese Students Fall on the Continuum

As mentioned earlier, the Lebanese sample within the present study reported higher means on the measures of independence as compared to interdependence, and their Western counterpart. Such a result already places Lebanon closer to the individualistic side of the cultural continuum (whilst maintaining the understanding that an individual can be high on one and low on the other, with emphasis placed on both tendencies (individualistic and collectivistic) co-existing within cultures and individuals (Taras et al., 2014; Ayyash-Abdo, 2001). The emphasis on the multidimensional nature of the culture continuum is important to keep in mind as we explore the upcoming results in order to avoid "culture-as-a-system" overgeneralizations, which

stem from grouping certain aspects or attributes of a group and presenting it as a reflection of the characteristic of the group (Poortinga, 2015). In line with this understanding, the Lebanese sample's results on the interplay of emotion regulation strategies and cultural orientation present a need to pause and explore. Even though earlier results within the current study have pointed to Lebanon pulling more towards individualism/ independent self-construals, the present study also reported positive significant relationships between cognitive reappraisal and *both* independent and interdependent self-construals. This is an interesting result since the positive relationship between cognitive reappraisal and independent self-cosntruals was expected – similar results were found in a study conducted with undergraduate students in Southern Greece (Zampetakis et al., 2016). However, the significant positive relationship between cognitive reappraisal and interdependent self-cosntruals was not expected and perhaps points to the earlier argument regarding Kagitcibasi's (2002) theory of a *family model of emotional/psychological interdependence*. We have argued that the Lebanese population cannot be categorized as solely individualistic or collectivistic, and such results indicating a pull towards both cultural orientations and self-construals, whilst maintaining the preference and usage of cognitive reappraisal as an emotion regulation strategy, provide support for *hypothesis 12*.

Conclusion

All in all, the present study was able to support the expected hypotheses and gain a better understanding regarding the specified population of university students in Lebanon as well as Netherlands.

Our findings yielded results pointing to cognitive reappraisal as efficient in managing stress and it's use predicting better overall well-being levels for both populations: Dutch and Lebanese. Of further importance to note is the *lack* of results found regarding the use of

expressive suppression and its correlation with either cultural orientation/ self-construal. Expressive suppression is usually associated with a more depressed mood, lower life satisfactions levels and positive affect (Haga et al., 2009). However, previous literature has pointed to this specific emotion regulation strategy achieving a wide range of social functions such as self-protective acts of withdrawal when facing a social threat or prosocial functions such as hiding your glee from a peer during a competitive game in order to preserve the relationship (Butler et al., 2007). Considering both angles of the use of this emotion regulation strategy, it was interesting to see that no significant outcomes emerged - this indicates this is not a prominent emotion regulation strategy within the specified populations and this result does not hold a positive or a negative connotation and perhaps it's context needs to be specifically explored in future studies in order to gain a better understanding.

Importantly, the results put forth an updated and more construct-specific understanding of cultural orientation within the targeted Lebanese population. The results have also confirmed the need to explore cultural orientation using a different lens: the Dutch sample was considered as the individualistic and Western counterpart, yet the findings regarding independent and interdependent self-construals pointed towards a moderate pull in identifying with interdependence alongside the expected independence. This brings us to the following argument - Hofstede, regarded as the "father" of the construct, viewed individualism and collectivism as polar opposites on *one* continuum (meaning that low collectivism is functionally equivalent to high individualism); however, this unidimensional understanding has been challenged and now thought to be representative of two independent continua (Taras et al., 2014). This notion implies that an individual's position on the individualism continuum is independent of their position on the collectivism continuum, and so an individual could

simultaneously score low (or high) on both dimensions (Taras et al., 2014). The findings yielded from both the Dutch and Lebanese population is further evidence to stray from the prior unidimensional categorization of cultures and societies, but rather to focus on expanding and updating our understanding of the construct and how it is applicable across differing countries and individuals. Perhaps these findings will assist in how we view culture during these modern times and put forth implications regarding which constructs to isolate and delve into further in order to gain a more detailed understanding of culture, rather than resorting to "culture-as-a-system" generalizations (Poortinga, 2015).

Our results have pointed to the importance of understanding the individual from a relational perspective (probing about family relationships and connectedness in that domain) as well as a personal/individual perspective (paying attention to how the individual appraises a stressful situation in their lives, taking into account the nature of the stressor and how this may affect their overall wellbeing levels, as well as noticing the strive towards autonomy and independence whilst balancing family relations and possible emotional dependency). Within the clinical field, there is importance placed on understanding individual level differences with each client, as each person has their own unique contexts and perceptions. The present study has shed light on the importance of taking into account individual level differences, which holds implications for a deeper understanding of the university student in this case. The findings related to perceived stress levels and over well-being hold implications for university mental health professionals with respect to stress management programs, as we increase our understanding of the stressors students face and they way in which they are appraised. Through these postulations we are reminded about the complexities of each individual, and the importance of exploring the interplay between such variables with the surrounding interpersonal

environment. The intricate understanding of the university population now involves focusing on relationships with their families and their personal autonomy, whilst understanding this interplay as they are adapting to changes in lifestyle and managing their stress. Keeping in mind the aforementioned *family model of emotional/psychological interdependence* will aid in viewing this population through a different lens and adjusting interventions to cater to their specific needs.

Limitations and Future Research

It is important to mention artifacts that may have influenced the findings of the present study. Students from Lebanon were mostly gathered from Haigazian University and the surrounding area of Hamra. It is unfounded to assume that all university students from Haigazian are representative of the entirety of Lebanon based on possible Western and American influences on customs, media, and such. It is fair to say that both the area and university may be representative of a homogenous group and this is important to keep in mind as the present study does not aim to draw sweeping conclusions about Lebanon as a whole or about all university students in Lebanon. In fact, it points towards more similarities between the Dutch and Lebanese sample based on the aforementioned Western influences - this speaks to the construct of culture as we explore dissimilar sample pools that seem to have common ground in their Western adherences yet still exhibit differences with regards to their stress, wellbeing, and endorsement of interdependent self-construals. In addition, we must take note of the student sample pool and their university majors – the Dutch sample was comprised of students from undergraduate psychology classes. This is important to keep in mind before we draw generalizing conclusions about university students, considering our sample pool involved most of the participants from the Social and Behavioral Sciences faculty, rather than an array of differing majors, which may

influence thought patterns, lifestyle, emotion regulation strategies, and levels of perceived stress and overall wellbeing.

It is imperative to note a few points to consider when exploring the construct of stress and wellbeing. The present study utilized university students as the targeted population due to the unique stressor they face during such a transitional period of their lives (Doumit, 2012), however their levels of stress may still differ throughout the course of the semester or academic year based on examination periods, increased period of workload, or each individual's separate emotional and social life. Therefore, it is necessary to mention that the results of the present study are categorized as a general view of stress within the university population. Although data collection was conducted during a non-examination period of the semester, we cannot assume academic or social pressures are equal across the targeted populations. Perhaps this argument speaks to a larger theme of the necessity of exploring individual differences within conducted research (Gross & John, 2003).

Gender did not present as a variable to be controlled within this study – perhaps due to the imbalanced numbers of males and females within the present study. However, several researchers have put forth the need to explore the role of gender within social contexts and relative to emotions. Inclusion of the variable of gender was considered out of the scope of the present study, nonetheless the following arguments drawn from existent literature point to the need to consider the construct of gender within future studies, and its' interplay with cultural orientation, social contexts and understandings, as well as emotion regulation strategies.

Previous literature has suggested that women overtly exhibit stress when compared to males and more often report "letting out their feelings", while men tend to report controlling their emotions and not thinking about the situation; this notion was supported in the findings

showing that women were more likely than men to express their emotions behaviourally (Misra and Castillo, 2004, p. 134). In line with this, Lawrence, Ashford, and Dent (2006) examined differences in gender in relation to coping strategies and their influence on academic attainment and self-esteem; their findings pointed to significant differences with males showing a higher tendency to detach themselves from the emotional aspect of a situation and be emotionally inhibited (Monteiro et al., 2014). Interestingly, in Monteiro et al's., (2014) study on managing stress, the female participants reported a reluctance to symbolically alter the stressful situation but rather wished and hoped that the situation would go away; this form of a strategy is referred to as problem-focused disengagement, where the individual avoids/denies the stressful situation and is not actively involved in solving the problem (Monteiro et al., 2014). This finding of women being more likely to withdraw as a form of coping with a stressful situation could be attributed to gender-role socialization, where in this case young women are encouraged to use wishful thinking rather than concrete cognitive or behavioural tactics to dealing with stress (Monteiro et al., 2014). Considering Monteiro et al's., (2014) research was conducted in a culturally specific context of Botswana, this finding differs from Lawrence et al's., (2006) results where men reported being more emotionally inhibited and so, perhaps gender role socialization across varying cultures need to be considered when accounting for gender differences in emotion regulation.

It is clear that cultural orientations, as well as gender, play an influencing role when exploring stress levels in addition to emotion regulation. Of relevance to this argument, is the work conducted by Butler et al., (2007), who chose to conduct research involving only women in their sample based on the existent literature (Kring & Gordon, 1998) showing that women have been found to be more emotionally expressive than men, and because of the possibility of gender

interacting with culture (Butler et al., 2007). Findings showed that women with primarily European values conveyed lower levels of suppression which were associated with higher levels of negative emotion and self-protective goals than did women with bicultural European-Asian values, who in turn had the opposite association (i.e. lower levels of negative emotion associated with the use of suppression); these findings speak to the cultural moderation of social consequences of suppression (Butler et al., 2007).

A limitation to the present study is related to social desirability bias. In both samples, we cannot ignore the possible tendency for a respondent to present oneself in a more favourable manner. Considering the nature of our self-report surveys, there is room for the individual to respond in the way they would *ideally* like to, as opposed to how they would naturally respond should the situation be present in their daily lives. This is possible in how an individual views their level of stress (it could be more - or less - inflated from their perception, or perhaps they would want to minimise their reported levels of stress). Although this study's aim is to shed light on the interplay between the variables of interest, we must keep in mind that it does not allow to measure the individual's actual response in a present situation. This is applicable to both of our samples however, there is need to specifically mention Dirani (2008) and the findings related to Lebanon being viewed as individualistic. It is touched upon that "the Lebanese see themselves different from how others see them" (Dirani, 2008, p. 227), which perhaps sheds light on the social desirability bias but also points to the importance of considering the way in which an individual views themselves related to others and how this subjective tendency needs to be considered a limitation.

In line with the aforementioned limitation, there is precedence to mention analysis based on mean level differences. The self-report scales in this study were analysed through a

hypothesised path model using mean level differences, which are also described and discussed separately. However, this is an important limitation to keep in mind before attempting to draw conclusions based on comparison between the two samples since the mean may not necessarily reflect individual level differences. Furthermore, reference-group effects may influence the outcomes of the self-report measures as sometimes participants may respond in a way that is relative to the prototype within their own culture rather than based on the absolute level of the construct (Credé, Bashshur, & Niehorster,2010). Response styles must be discussed too considering previous literature has found consistent cross-cultural differences in extremity responding across 26 countries, based on the presentation and format of surveys, in addition to the nature of the individual's response style (Weijters, Millet, & Cabooter, 2020). Such limitations may hinder us from drawing a strong conclusion on the reported differences however it is a reasonable start to understanding the interplay between the variables and reminds us to stray from drawing conclusions of group level differences and equating them to individual level differences too.

Perhaps future research should consider the inclusion of a third population within the present study. Unfortunately, including a third population was outside the scope of this study. However, it may have led to influential results considering the model contained the Netherlands as the Western counterpart to the Lebanese population, perhaps there is a need to include a population deemed as collectivistic in order to draw sound conclusions based on any differences or similarities found amongst the populations. This may allow researchers to further assess the role of cultural orientation in relation to emotion regulation strategies and keeping in mind the aforementioned points in the literature surrounding suppression, perhaps including a population

deemed as collectivistic would shed light on the use of this emotion regulation strategy within certain contexts.

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Appendix A

Expanded Socio-Demographics Table

	Lebanese Sample N (%)	*Dutch Sample N (%)*
Gender		
Males	35 (22.9)	27 (14.1)
Females	117 (76.5)	163 (84.9)
Age (Mean; Standard Deviation)	21.3 ; 2.35	19 ; 2.06
Nationality		
Lebanese	141 (92.2)	
Dutch		178 (92.7)
Dual Nationality	28 (18.3)	
Other	11 (7.3)	9 (4.7)
Mother's place of birth		
Lebanon	126 (82.4)	
Netherlands		167 (87)
Other:	26 (17)	24 (12.5)
United Kingdom		1 (0.5)
Afghanistan		2 (1)
Aruba		1 (0.5)
Belgium		1 (0.5)
Brazil	2 (1.3)	
China		2 (1)
Curacao		2 (1)
Germany		2 (1)
Hungary	1 (0.7)	
Indonesia		2 (1)
Iran		2 (1)
Kenya		1 (0.5)
Kurdistan		1 (0.5)
Kuwait	3 (2)	

Lithuania		1 (0.5)
Morocco		1 (0.5)
Nigeria	4 (2.6)	
Palestine	2 (1.3)	
Russia	2 (1.3)	
Saudi Arabia	1 (0.7)	
Sierra Leone	2 (1.3)	
Suriname		2 (1)
Syria	8 (5.2)	
Turkey		3 (1.5)
United States of America	1 (0.7)	
Mother's highest educational level		
No schooling completed	6 (3.9)	3 (1.6)
Nursey school to 8th grade	6 (3.9)	3 (1.6)
9th, 10th, or 11th grade	17 (11.1)	2 (1)
12th grade, no diploma	7 (4.6)	5 (2.6)
High school graduate	25 (16.3)	37 (19.3)
Diploma or the equivalent	11 (7.2)	82 (42.7)
Some university, but less than 1 year	8 (5.2)	3 (1.6)
1 or more years of university, no degree	14 (9.2)	1 (0.5)
Bachelor's degree (BA,BS)	45 (29.4)	29 (15.1)
Master's degree (MA, MS, MBA)	8 (5.2)	19 (9.9)
Professional degree (MD)	2 (1.3)	5 (2.6)
Doctorate degree (PhD)	3 (2)	2 (1)
Father's highest educational level		
No schooling completed	8 (5.2)	3 (1.6)
Nursey school to 8th grade	13 (8.5)	3 (1.6)
9th, 10th, or 11th grade	18 (11.8)	2 (1)

12th grade, no diploma	4 (2.6)	1 (0.5)
High school graduate	11 (7.2)	35 (18.2)
Diploma or the equivalent	12 (7.8)	70 (36.5)
Some university, but less than 1 year	6 (3.9)	
1 or more years of university, no degree	13 (8.5)	5 (2.6)
Bachelor's degree (BA,BS)	34 (22.2)	30 (15.6)
Master's degree (MA, MS, MBA)	21 (13.7)	28 (14.6)
Professional degree (MD)	4 (2.6)	6 (3.1)
Doctorate degree (PhD)	8 (5.2)	6 (3.1)
Father's place of birth		
Lebanon	134 (87.6)	
Netherlands		166 (86.5)
Other:	18 (11.8)	23 (12)
Afghanistan		2 (1)
Angola		1 (0.5)
Aruba		1 (0.5)
Curacao		1 (0.5)
France	1 (0.7)	
Germany		1 (0.5)
Hong Kong		1 (0.5)
Indonesia		1 (0.5)
Ivory Coast	1 (0.7)	
Iran		2 (1)
Jordan	1 (0.7)	
Kenya		1 (0.5)
Kuwait	3 (2)	
Morocco		1 (0.5)
Nigeria	1 (0.7)	

Portugal		1 (0.5)
Saudi Arabia	1 (0.7)	
Sierra Leone	3 (2)	
Suriname		2 (1)
Switzerland		1 (0.5)
Syria	7 (4.6)	
Turkey		5 (2.6)

Appendix B

Tables of Outliers

Table 4:

Dutch Sample - Observations farthest from the centroid (Mahalanobis distance)

Observation number	Mahalanobis d-squared	p1	p2
146	27.780	.000	.020
69	26.674	.000	.000
183	19.767	.003	.021
101	18.761	.005	.012
87	17.311	.008	.022
57	14.335	.026	.386
30	13.248	.039	.631
58	12.578	.050	.753
151	12.568	.050	.636
185	12.358	.054	.602
39	12.101	.060	.600
34	11.734	.068	.663
82	11.713	.069	.562
79	11.472	.075	.580
120	11.419	.076	.500
16	10.976	.089	.648
22	10.705	.098	.704
164	10.533	.104	.712
60	10.398	.109	.704
67	10.259	.114	.701
190	10.256	.114	.618
133	10.177	.117	.581
51	10.053	.122	.578
172	9.915	.128	.586
61	9.864	.131	.537
115	9.636	.141	.617
127	9.584	.143	.574
128	9.443	.150	.597
74	9.262	.159	.654
84	9.128	.167	.678
14	8.931	.177	.747
177	8.860	.182	.732
143	8.786	.186	.720
113	8.756	.188	.676

Observation number	Mahalanobis d-squared	p1	p2
85	8.689	.192	.660
13	8.494	.204	.742
167	8.478	.205	.692
149	8.442	.208	.656
47	8.263	.219	.733
10	8.262	.220	.673
52	8.250	.220	.618
141	8.247	.221	.552
111	8.236	.221	.493
64	8.019	.237	.625
7	7.991	.239	.585
153	7.754	.257	.732
171	7.738	.258	.687
157	7.639	.266	.715
40	7.605	.269	.687
56	7.519	.276	.705
62	7.457	.281	.704
178	7.406	.285	.693
54	7.385	.287	.655
44	7.335	.291	.643
80	7.258	.298	.659
137	7.207	.302	.650
116	7.166	.306	.632
132	7.059	.315	.680
121	7.049	.316	.632
109	7.029	.318	.594
114	7.018	.319	.545
90	6.909	.329	.602
86	6.728	.347	.730
181	6.614	.358	.784
70	6.564	.363	.782
25	6.563	.363	.735
105	6.555	.364	.693
135	6.546	.365	.647
48	6.524	.367	.614
192	6.396	.380	.698
168	6.378	.382	.664
148	6.375	.383	.612
66	6.249	.396	.697
98	6.229	.398	.665
81	6.124	.409	.726

Observation number	Mahalanobis d-squared	p1	p2
107	6.110	.411	.690
77	6.085	.414	.665
131	6.083	.414	.613
65	5.981	.425	.676
163	5.979	.426	.625
96	5.909	.433	.653
24	5.901	.434	.608
119	5.723	.455	.759
41	5.715	.456	.719
42	5.661	.462	.730
150	5.658	.463	.684
124	5.633	.466	.662
68	5.612	.468	.633
46	5.574	.473	.626
4	5.551	.475	.600
173	5.485	.483	.629
117	5.481	.484	.578
28	5.414	.492	.610
125	5.394	.494	.581
31	5.293	.507	.657
93	5.285	.508	.614
53	5.269	.510	.579
43	5.235	.514	.568
89	5.182	.521	.584
18	5.124	.528	.608

Table 5

Lebanese Sample - Observations farthest from the centroid (Mahalanobis distance)

Observation number	Mahalanobis d-squared	p1	p2
68	20.177	.003	.326
150	17.907	.006	.260
85	16.777	.010	.204
137	16.098	.013	.146
109	15.847	.015	.075
142	15.005	.020	.091
18	14.780	.022	.054
31	14.217	.027	.060
121	13.894	.031	.048
57	12.418	.053	.299

Observation number	Mahalanobis d-squared	p1	p2
64	12.210	.057	.265
133	11.165	.083	.630
91	10.830	.094	.686
37	10.552	.103	.721
46	10.329	.111	.738
26	10.328	.111	.645
75	10.304	.112	.558
126	9.993	.125	.644
6	9.875	.130	.621
61	9.812	.133	.566
76	9.593	.143	.613
100	9.430	.151	.630
107	9.304	.157	.626
4	9.261	.159	.568
59	9.204	.162	.521
99	9.184	.163	.448
92	9.128	.167	.403
104	9.018	.173	.399
78	8.677	.193	.571
10	8.673	.193	.492
25	8.480	.205	.561
138	8.020	.237	.814
128	7.997	.238	.772
24	7.936	.243	.752
129	7.904	.245	.711
136	7.813	.252	.713
146	7.798	.253	.657
50	7.757	.256	.621
41	7.592	.270	.687
63	7.575	.271	.634
77	7.482	.279	.644
83	7.412	.284	.637
127	7.356	.289	.618
30	7.341	.290	.561
124	7.335	.291	.496
122	7.291	.295	.467
28	7.286	.295	.402
123	7.256	.298	.362
40	7.252	.298	.303
120	7.144	.308	.333
93	7.143	.308	.273

Observation number	Mahalanobis d-squared	p1	p2
90	7.003	.321	.332
13	6.992	.322	.281
36	6.986	.322	.231
135	6.656	.354	.473
139	6.638	.356	.424
70	6.601	.359	.396
96	6.601	.359	.333
141	6.600	.359	.276
3	6.571	.362	.246
34	6.541	.365	.219
48	6.530	.366	.181
115	6.519	.368	.147
32	6.410	.379	.178
79	6.374	.383	.161
53	6.303	.390	.168
56	6.107	.411	.278
74	6.106	.411	.227
152	6.001	.423	.268
23	5.860	.439	.352
39	5.841	.441	.313
52	5.791	.447	.306
113	5.770	.449	.272
95	5.727	.455	.260
80	5.671	.461	.260
130	5.652	.463	.227
54	5.444	.488	.385
19	5.416	.492	.356
125	5.233	.514	.513
119	5.185	.520	.507
114	5.019	.541	.648
65	5.018	.542	.588
88	4.963	.549	.593
44	4.919	.554	.585
22	4.803	.569	.666
112	4.750	.576	.670
116	4.721	.580	.645
97	4.713	.581	.593
12	4.676	.586	.577
143	4.565	.601	.656
151	4.530	.605	.639
67	4.448	.616	.681

Observation number	Mahalanobis d-squared	p1	p2
20	4.436	.618	.635
16	4.408	.622	.608
42	4.164	.654	.831
106	4.109	.662	.838
71	3.919	.688	.934
111	3.888	.692	.927
131	3.878	.693	.906
49	3.867	.695	.883

Appendix C

Participant Letter

Dear Ms./Mr.,

I am Maya Sasso, a Masters student in Clinical Psychology at the Department of Psychology at Haigazian University in Lebanon. I am currently carrying out a research study titled *"Variations in emotion regulation in predicting psychological wellbeing as a function of self-construals: A cross cultural comparison of Lebanese and Dutch youth",* as advised by: Lucy Tavitian - instructor of Psychology at the Psychology Department of Haigazian University in Lebanon and a doctoral candidate at the department of Culture Studies at Tilburg University in the Netherlands - and in collaboration with Dr. Michael Bender - Assistant professor, Department of Social Psychology at Tilburg University in the Netherlands. You are being asked to take part in this study since you are a university student aged between 18 and 25. Kindly read the below information to decide whether you would like to participate in this research study.

Purpose of the Research Project

This research study aims to understand the role of an individual's cultural orientation in how they regulate their emotions, thus predicting their psychological wellbeing. This in turn allows for more effective implementation of stress management programs and equips the university mental health practitioners in understanding the role of an individual's culture with regards to their wellbeing and how they regulate their emotions. This study will contribute towards the partial fulfillment of my academic study requirements at Haigazian University.

What will I be asked to do?

If you choose to participate in this research study, you will be asked to fill in a questionnaire. Your participation will involve completing a demographic form and a survey that entails statements that you will have to rate based on agreement. This will take approximately 15 minutes.

Participation in this project is completely voluntary. You are free to withdraw anytime without having to give any reason for your withdrawal.

What are my rights?

Participation in this study is anonymous and confidential. Your name or any other identifying information will not be asked. Data you provide along with data from all participants in the present research will be stored in aggregate in a locked cabinet in the office of Ms. Tavitian at Haigazian University and a password protected folder on my personal computer. The data will be analysed and reported in aggregate. Only the principle investigators of this study will have access to the compiled data which will be stored for a period of 10 years post data. During this time, you have the right to inspect the data. You have the right to withdraw your consent or discontinue participation at any time for any reason. Your decision to refuse participation or withdraw will not involve

any penalty or loss of benefits to which you are entitled. Discontinuing participation in no way affects your relationship with Haigazian University or Tilburg University.

This research study has been reviewed and has received clearance from the Haigazian University ethics committee and Ethics Review Board of the School of Social and Behavioral Sciences at Tilburg University. If you have any further concerns about your rights as a research participant, please, do not hesitate to contact ethics committee email and my extension.

What are the risks and benefits of participation?
Participation in this study does not involve any physical risk or emotional risk to you beyond the risks of daily life. You will receive no direct benefits from participating in this research; however, your participation does help researchers better understand the role of culture regarding how we regulate our emotions.

Contact information
If you have any questions or concerns about the research, you may contact:

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Appendix D

Informed Consent

Please read the following statements carefully.

1. ___I agree to participate in this research project conducted for purposes of study.
2. ___My decision is voluntary and does not involve payment of any kind.
3. ___I know that I can choose to withdraw from participation any time without any penalties or consequences whatsoever.
4. ___I also hold the right to decline to respond to any question(s) that I may feel uncomfortable with.
5. ___My participation involves answering a survey for approximately 20 minutes.
6. ___I have been assured that the researcher will maintain my identity confidential.
7. ___I have been assured that the information from this survey will be used for the purpose of academic study and publication.
8. ___I have received the assurance that this research study has been duly reviewed and approved by the ethics committees at Haigazian University and Tilburg University.
9. ___I agree that the data gathered be kept in a secure location under the care of the study investigators for a period of 10 years.
10. ___I have been assured that I can access my data (if identified) at any time.
11. ___I have read, listened and fully understand the explanation given to me. All my questions have been satisfactorily answered.
12. ___I, therefore, choose to voluntarily participate in this research study.

Appendix E

Emotion Regulation Questionnaire (ERQ)

We would like to ask you some questions about your emotional life, in particular, how you control (that is, regulate and manage) your emotions. The questions below involve two distinct aspects of your emotional life. One is your emotional experience, or what you feel like inside. The other is your emotional expression, or how you show your emotions in the way you talk, gesture, or behave. Although some of the following questions may seem similar to one another, they differ in important ways. For each item, please answer using the following scale:

Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
1	2	3	4	5	6	7

When I want to feel more positive emotion (such as joy or amusement), I change what I'm thinking about.	1	2	3	4	5	6	7
I keep my emotions to myself.	1	2	3	4	5	6	7
When I want to feel less negative emotion (such as sadness or anger), I change what I'm thinking about.	1	2	3	4	5	6	7
When I am feeling positive emotions, I am careful not to express them.	1	2	3	4	5	6	7
When I'm faced with a stressful situation, I make myself think about it in a way that helps me stay calm.	1	2	3	4	5	6	7
I control my emotions by not expressing them.	1	2	3	4	5	6	7
When I want to feel more positive emotion, I change the way I'm thinking about the situation.	1	2	3	4	5	6	7
I control my emotions by changing the way I think about the situation I'm in.	1	2	3	4	5	6	7
When I am feeling negative emotions, I make sure not to express them.	1	2	3	4	5	6	7
When I want to feel less negative emotion, I change the way I'm thinking about the situation.	1	2	3	4	5	6	7

Scoring:

Items 1, 3, 5, 7, 8, 10 make up the Cognitive Reappraisal facet. Items 2, 4, 6, 9 make up the Expressive Suppression facet.

Scoring is kept continuous.
Each facet's scoring is kept separate.

Appendix F

Perceived Stress Scale (PSS)

The questions in this scale ask you about your feelings and thoughts during the last month. In each case, you will be asked to indicate how often you felt or thought a certain way.

Never	Almost Never	Sometimes	Fairly Often	Very Often
0	1	2	3	4

In the last month, how often have you been upset because of something that happened unexpectedly?	0	1	2	3	4
In the last month, how often have you felt that you were unable to control the important things in your life?	0	1	2	3	4
In the last month, how often have you felt nervous and “stressed”?	0	1	2	3	4
In the last month, how often have you felt confident about your ability to handle your personal problems?	0	1	2	3	4
In the last month, how often have you felt that things were going your way?	0	1	2	3	4
In the last month, how often have you found that you could not cope with all the things that you had to do?	0	1	2	3	4
In the last month, how often have you been able to control irritations in your life?	0	1	2	3	4
In the last month, how often have you felt that you were on top of things?	0	1	2	3	4
In the last month, how often have you been angered because of things that were outside of your control?	0	1	2	3	4
In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?	0	1	2	3	4

Appendix G

Sixfold Self-Construal Scale (SSCS)

Instructions: Below, you will find a series of questions that revolve around your perception of yourself. Each question is followed by a set of **6** possible categories: family, friends, social groupings, school/department peers, humanity in general, and personal self.

Social groupings could be any of the following: *political group/party, Governmental institution, or religious affiliation*.

Scale use: You are asked to mark, from a low of 1 to a high of 7 the **frequency/magnitude** that most reflects your response to each question. . Please respond to each question **AND** to each item within that question. Make sure to read each question carefully. Thank you.

to a very small extent			**to a moderate extent**			**to a very large extent**
1	**2**	**3**	**4**	**5**	**6**	**7**

1. I think of myself as connected (linked) to :

My Family	1	2	3	4	5	6	7
My Friends	1	2	3	4	5	6	7
Students in my department/faculty	1	2	3	4	5	6	7
My Social Grouping	1	2	3	4	5	6	7
Humanity in General	1	2	3	4	5	6	7
Myself (I am a unique person separate from others)	1	2	3	4	5	6	7

2. I control my behaviour to accommodate the wishes (interests) of :

My Family	1	2	3	4	5	6	7
My Friends	1	2	3	4	5	6	7
Students in my department/faculty	1	2	3	4	5	6	7
My Social Grouping	1	2	3	4	5	6	7
Humanity in General	1	2	3	4	5	6	7
Myself (I am a unique person separate from others)	1	2	3	4	5	6	7

3. I am affected by events that concern(relate) to :

My Family	1	2	3	4	5	6	7
My Friends	1	2	3	4	5	6	7
Students in my department/faculty	1	2	3	4	5	6	7
My Social Grouping	1	2	3	4	5	6	7
Humanity in General	1	2	3	4	5	6	7
Myself (I am a unique person separate from others)	1	2	3	4	5	6	7

4. I am aware of the needs, desires and goals of :

My Family	1	2	3	4	5	6	7
My Friends	1	2	3	4	5	6	7
Students in my department/faculty	1	2	3	4	5	6	7
My Social Grouping	1	2	3	4	5	6	7
Humanity in General	1	2	3	4	5	6	7
Myself (I am a unique person separate from others)	1	2	3	4	5	6	7

5. I feel I have a strong relationship with :

My Family	1	2	3	4	5	6	7
My Friends	1	2	3	4	5	6	7
Students in my department/faculty	1	2	3	4	5	6	7
My Social Grouping	1	2	3	4	5	6	7
Humanity in General	1	2	3	4	5	6	7
Myself (I am a unique person separate from others)	1	2	3	4	5	6	7

Appendix H

General Health Questionnaire (GHQ)

The scale asks whether you have experienced a particular symptom or behavior recently. Each item is rated on a four-point scale:

More so than usual	Same as usual	Less so than usual	Much less than usual
1	2	3	4

Have you been able to concentrate on whatever you're doing?	1	2	3	4
Have you felt that you are playing a useful part in things?	1	2	3	4
Have you felt capable of making decisions about things?	1	2	3	4
Have you been able to enjoy your normal day-to-day activities?	1	2	3	4
Have you been able to face up to problems?	1	2	3	4
Have you been able to be reasonably happy, all things considered?	1	2	3	4

Not at all	No more than usual	Rather more than usual	Much more than usual
1	2	3	4

Have you lost much sleep over worry?	1	2	3	4
Have you felt constantly under strain?	1	2	3	4
Have you felt you couldn't overcome your difficulties?	1	2	3	4
Have you been feeling unhappy or depressed?	1	2	3	4
Have you been losing confidence in yourself?	1	2	3	4
Have you been thinking of yourself as a worthless person?	1	2	3	4

Appendix I

Singelis Self-Construal Scale (SCS)

This is a questionnaire that measures a variety of feelings and behaviors in various situations. Listed below are a number of statements. Read each one as if it referred to you. Please respond to every statement. Thank you.

Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
1	2	3	4	5	6	7

I enjoy being unique and different from others in many respects.	1	2	3	4	5	6	7
I can talk openly with a person who I meet for the first time, even when this person is much older than I am.	1	2	3	4	5	6	7
Even when I strongly disagree with group members, I avoid an argument.	1	2	3	4	5	6	7
I have respect for the authority figures with whom I interact.	1	2	3	4	5	6	7
I do my own thing, regardless of what others think.	1	2	3	4	5	6	7
I respect people who are modest about themselves.	1	2	3	4	5	6	7
I feel it is important for me to act as an independent person.	1	2	3	4	5	6	7
I will sacrifice my self interest for the benefit of the group I am in.	1	2	3	4	5	6	7
I'd rather say "No" directly, than risk being misunderstood.	1	2	3	4	5	6	7
Having a lively imagination is important to me.	1	2	3	4	5	6	7
I should take into consideration my parents' advice when making education/career plans.	1	2	3	4	5	6	7
I feel my fate is intertwined with the fate of those around me.	1	2	3	4	5	6	7
I prefer to be direct and forthright when dealing with people I've just met.	1	2	3	4	5	6	7
I feel good when I cooperate with others.	1	2	3	4	5	6	7
I am comfortable with being singled out for praise or rewards.	1	2	3	4	5	6	7
If my brother or sister fails, I feel responsible.	1	2	3	4	5	6	7
I often have the feeling that my relationships with others are more important than my own accomplishments.	1	2	3	4	5	6	7
Speaking up during a class (or a meeting) is not a problem for me.	1	2	3	4	5	6	7
I would offer my seat in a bus to my professor (or my boss).	1	2	3	4	5	6	7
I act the same way no matter who I am with.	1	2	3	4	5	6	7
My happiness depends on the happiness of those around me.	1	2	3	4	5	6	7
I value being in good health above everything.	1	2	3	4	5	6	7

I will stay in a group if they need me, even when I am not happy with the group.	1	2	3	4	5	6	7
I try to do what is best for me, regardless of how that might affect others.	1	2	3	4	5	6	7
Being able to take care of myself is a primary concern for me.	1	2	3	4	5	6	7
It is important to me to respect decisions made by the group.	1	2	3	4	5	6	7
My personal identity, independent of others, is very important to me.	1	2	3	4	5	6	7
It is important for me to maintain harmony within my group.	1	2	3	4	5	6	7
I act the same way at home that I do at school (or work).	1	2	3	4	5	6	7
I usually go along with what others want to do, even when I would rather do something different.	1	2	3	4	5	6	7

COMPOSITE SCORES

Independent Subscale Items (IND)

Sing1, Sing2, Sing5, Sing7, Sing9, Sing10, Sing13, Sing15, Sing18, Sing20, Sing22, Sing24, Sing25, Sing27, Sing29

Interdependent Subscale Items (INT)

Sing3, Sing4, Sing6, Sing8, Sing11, Sing12, Sing14, Sing16, Sing17, Sing19, Sing21, Sing23, Sing26, Sing28, Sing30

Appendix J

Socio-demographic Questions

1. In which country do you currently live in?

- ☐ Lebanon
- ☐ the United States of America
- ☐ Netherlands
- ☐ France
- ☐ Other, specify _____

2. How old are you (in years)?

_____

3. For how long have you lived in the country you currently reside in? Please specify number of years.

_____

4. Which country were you born in?

- ☐ Lebanon
- ☐ the United States of America
- ☐ Canada
- ☐ France
- ☐ Syria
- ☐ the United Kingdom
- ☐ Netherlands
- ☐ Other, specify _____

5. What is your nationality? (Please select all that apply).

- ☐ Lebanese

- ☐ American
- ☐ Dutch
- ☐ French
- ☐ Syrian
- ☐ Armenian
- ☐ British
- ☐ Other, specify _____

6. You are a:
   - ☐ Freshman
   - ☐ Sophomore
   - ☐ Junior
   - ☐ Senior
   - ☐ Masters student
7. What is the highest education level you have achieved?
   - ☐ No schooling completed
   - ☐ Nursery school to 8th grade
   - ☐ 9th, 10th or 11th grade
   - ☐ 12th grade, no diploma
   - ☐ High school graduate - high school
   - ☐ Diploma or the equivalent
   - ☐ Some university, but less than 1 year
   - ☐ 1 year or more of university, no degree
   - ☐ Bachelor's degree (for example: BA, BS)
   - ☐ Master's degree (for example: MA, MS, MEng, MBA)
   - ☐ Professional degree (for example: MD)
   - ☐ Doctorate degree (for example: PhD)

8. What is your gender?

- Male
- Female

9. What is your marital status?

- Married
- Widowed
- Divorced
- Separated
- Never married

10. Do you have any children?

- Yes. If so, how many? _____
- No

11. Which country was your mother born in?

- Lebanon
- the United States of America
- Canada
- France
- Syria
- the United Kingdom
- Netherlands
- Other, specify _____

12. What is the highest level of education your mother has achieved?

- No schooling completed
- Nursery school to 8th grade
- 9th, 10th or 11th grade
- 12th grade, no diploma
- High school graduate - high school
- Diploma or the equivalent
- Some university, but less than 1 year
- 1 or more years of university, no degree
- Bachelor's degree (for example: BA, BS)
- Master's degree (for example: MA, MS, MEng, MBA)
- Professional degree (for example: MD)
- Doctorate degree (for example: PhD)

13. Which country was your father born in?

- Lebanon
- the United States of America
- Canada
- France
- Syria
- the United Kingdom
- Netherlands
- Other, specify _____

14. What is the highest level of education your father has achieved?

- No schooling completed
- Nursery school to 8th grade
- 9th, 10th or 11th grade
- 12th grade, no diploma
- High school graduate - high school
- Diploma or the equivalent
- Some university, but less than 1 year
- 1 or more years of university, no degree
- Bachelor's degree (for example: BA, BS)
- Master's degree (for example: MA, MS, MEng, MBA)
- Professional degree (for example: MD)
- Doctorate degree (for example: PhD)

Appendix K

Debrief Letter

The research team involved in this study would like to thank you for participating.

The aim of this study is to explore the way an individual regulates their emotions using either a strategy relying on adjusting the way of thinking to reinterpret the emotional situation, or by suppressing the emotions felt and adjusting the behaviour accordingly. The latter has been associated with decreased levels of psychological wellbeing. However, previous literature has shown that holding a different cultural orientation may result in more positive wellbeing levels. Therefore, the purpose of this study was to explore how an individual's cultural orientation may lead to the emotion regulation strategy employed thus predicting psychological wellbeing. By doing so, we aim to further understand the role of culture and how it differs per individual.

All the information provided is confidential and kept in a password protected computer. You have the right to withdraw your participation and information provided at any time and for any reason. Contact information of the researcher is provided below for withdrawal purposes or any questions or concerns.

Thank you again for your cooperation.

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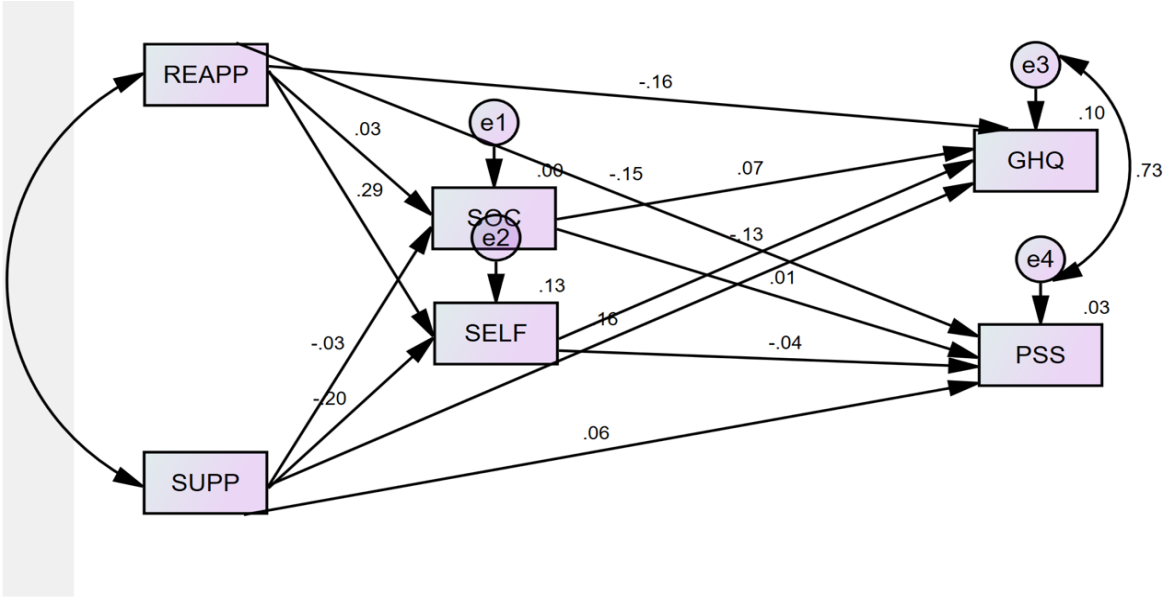
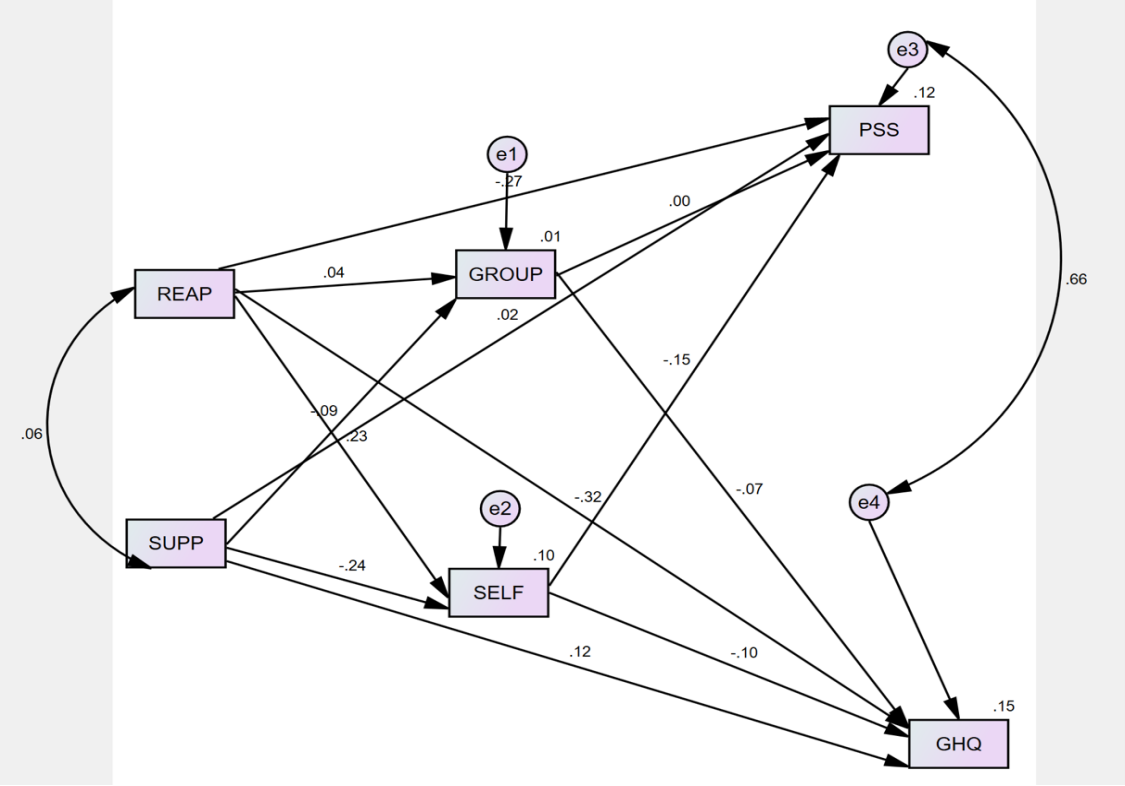
Appendix L

Harb Path Models

Lebanese Model.



Dutch Model.


e3
.12
PSS
e1
-.27
.00
.01
GROUP
.04
REAP
.66
.02
-.15
.06
-.09
.23
-.32
-.07
e4
e2
SUPP
.10
-.24
SELF
.12
-.10
.15
GHQ