AMERICAN UNIVERSITY OF BEIRUT

VALUE CONGRUENCES, PERCEIVED STRESS, AND LIFE-SATISFACTION IN A STUDENT SAMPLE FROM THE AMERICAN UNIVERSITY OF BEIRUT

by

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AN ABSTRACT OF THE THESIS OF

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Title: Value Congruences, Perceived Stress, and Life-Satisfaction in a Student Sample from the American University of Beirut

The purpose of the present study was to assess the importance of value congruence in predicting perceived stress (PS) and life-satisfaction (LS).This thesis hypothesized that value congruence between the individual and their environment promotes LS. Value incongruence, on the other hand, causes stress, which in turn decreases LS. PS was also hypothesized to mediate the relationship between value congruence and LS. Three contexts of comparison were used to assess value congruence, the fit between the individual and his/her parents, fellow university students, and fellow Lebanese nationals.

The measures used in the study were the Satisfaction with Life Scale (Diener et al., 1985), the Perceived Stress Scale (Cohen et al., 1983), and the Basic Human Values Scale (Schwartz, 2002). The final sample consisted of 218 American University of Beirut students enrolled in an Introductory Psychology course. The findings of the study only partially supported the hypotheses. There was no relationship between value congruence and perceived stress. Consequently, perceived stress did not mediate the relationship between value congruence and life-satisfaction. Only four value discrepancies predicted LS. Value discrepancies between the self and AUB students on Self-Transcendence; between the self, AUB students, and Lebanese on Self-Enhancement; and self and Lebanese on the Arab value, were positively related to LS. The AUB context proved to be the most important context for the relationship between value congruence and life-satisfaction. The findings of the study suggest that centrality of the value to the interaction between the individual and their environment is more important to life-satisfaction than the magnitude of the discrepancy. It is also important to account for the direction of the value discrepancy.

Limitations of the current thesis include the cross-sectional and correlational nature of the study which restrict any conclusions about causation. In addition, the sample is not representative of the general population. Also, the use of self-report measures may introduce response biases to the data. Despite these limitations, the use of psychometrically valid and reliable scales, in addition to the large sample size, give strength to the robustness of the associations found.

Keywords: Values, value congruence, perceived stress, life-satisfaction

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CHAPTER I

SURVEY OF THE LITERATURE

A. Introduction

The human motivation to understand and pursue happiness has been well documented in history, with its roots in several disciplines, ranging from economics to philosophy (Jayawickreme, Forgeard, & Seligman, 2012). The scientific study of happiness, or subjective well-being (SWB), is a recent endeavor, gaining popularity in the 1970s (Diener, 1984). It is primarily concerned with understanding and delineating the objective and subjective factors that contribute to the promotion of psychological well-being (Diener & Ryan, 2008).

Researchers from various traditions have explored predictors or determinants of SWB. This thesis will focus on the attunement model of SWB (Kitayama & Markus, 2000), specifically examining the way in which perceived fit between the individuals and their environment promotes SWB. While there are many ways fit can be measured, this study will focus on the measurement of the congruence of values between the individual and their environment.

This thesis will first define and outline research on SWB, stress, values, and the role of value congruence in predicting stress and SWB. Subsequently, the aims of the present research and methods used to undertake the study will be detailed. The statistical analysis conducted and the results will then be presented. Finally, the implications of the results, and the limitations of the study will be detailed in the discussion section.

B. Subjective Well-Being

SWB is generally defined as a relative assessment of a person's cognitive and affective evaluation of the quality of his/her life (Diener & Ryan, 2008). Diener, Suh, Lucas, and Smith (1999) distinguish between three different components of SWB: affect, life-satisfaction, and satisfaction in specific domains. Affect refers to one's emotions, moods, and feelings, and measures the frequency of pleasant and unpleasant affect (Diener & Ryan, 2008). Life satisfaction (LS), the cognitive element, is "a judgmental process, in which individuals assess the quality of their lives on the basis of their own unique set of criteria" (Pavot & Diener, 1993, p. 102). The affective and cognitive components represent global judgments of SWB. The third construct, the domain specific component, refers to satisfaction with certain aspects of one's life, such as work or relationships (Pavot & Diener, 1993).

The first seminal review of SWB research was conducted by Wilson in 1967. At the time, research on SWB focused primarily on the external objective correlates of SWB, such as income, marital status, and age. Subjective variables such as self-esteem, optimism, and extroversion, were also measured. The results of this review indicated that overall "the happy person emerges as a young, healthy, well-educated, well-paid, extroverted, optimistic, worry-free, religious, married person with high self-esteem, high job morale, modest aspirations, of either sex and of a wide range of intelligence" (Wilson, 1967, p. 294).

The field of SWB research has witnessed considerable growth and expansion, and has shifted direction since Wilson's seminal review in 1967. While earlier research generally looked at both objective and subjective correlates of SWB, more recent research attempts to understand the internal processes that contribute to an individual's

SWB. Diener (1984) makes a distinction between research on bottom-up versus top-down processes that affect SWB. Bottom-up factors are the external or situational circumstances that affect SWB, such as wealth or income. Top-down processes, on the other hand, are the internal processes of the individual that influence the way s/he perceives or evaluates any situation, such as personality traits. These internal processes are linked to the individual's inherent tendencies to experience or interpret their surroundings in a particular way (Diener and Ryan, 2008). This distinction between processes shifts the direction from correlational research to research investigating the mechanism by which an individual's internal processes interact with their environment or objective circumstances, and the way in which this affects their SWB.

Earlier research mainly explored the bottom-up predictors of SWB. According to Lucas and Diener (2008), researchers who study bottom-up processes conceptualize SWB as an outcome, with the satisfaction of basic needs being crucial for the achievement of the outcome. In line with this reasoning, much research has been undertaken to find interventions that address the fulfillment of human needs, with the goal of increasing SWB of a sample or population (Lyubomirsky, Sheldon, & Schkade, 2005; Seligman, Steen, Park, & Peterson, 2005).

One of the main researched bottom-up predictors of SWB has been a nation's wealth, or economic development (Diener, Diener, & Diener, 1995). Using data from 43 nations, Inglehart (1997) demonstrated a positive correlation between a nation's wealth and mean levels of SWB. Diener, Diener and Diener (1995) found similar strong correlations between SWB and income. However, despite the importance of research on bottom-up processes, these factors have been shown to contribute only a small percentage of the variance in SWB. For example, Argyle (1999) reviewed research on

bottom-up predictors of SWB, including age, marital status, ethnicity, income, and education. He found that these variables only contributed about 15% of the variance in SWB. This shows that the demographic variables can only explain a limited percentage of what affects and contributes to SWB.

Research that looks at top-down predictors conceptualizes SWB as an ongoing process, where internal structures within the individual continuously affect and interplay with the environment, directly influencing SWB (Lucas & Diener, 2008). One line of research using this approach has extensively studied the relationship between personality traits and SWB. In their meta-analysis, Ozer and Benet-Martinez (2006) clearly demonstrate the robust relationship between the big-five personality traits and SWB. The authors found that the strongest links are between the traits of extraversion, neuroticism and SWB. People low on neuroticism and high on extraversion tend to have a positive outlook to situations they encounter. They do not place emphasis on opportunities that are beyond their reach, and do not dwell on negative feedback - which positively influences SWB. Diener et al. (1999) argue that despite the robust relationship between SWB and personality traits, SWB is not a trait. While personality may predispose individuals to affective dispositions, SWB is also largely influenced by life situations and events. For a holistic understanding of SWB, it is necessary to account for the interaction between individual dispositions and objective predictors or environmental influences.

Cross-cultural research in SWB which explores differences in the meaning, predictors, and correlates of SWB across cultures, has greatly informed research on top-down predictors of SWB. Matsumoto (2000) defines culture as "a dynamic system of rules – explicit and implicit – established by groups in order to ensure their survival,

involving attitudes, values, beliefs, norms, and behaviors, shared by a group but harbored differently by each specific unit within the group, communicated across generations, relatively stable but with the potential to change across time" (p. 39). Culture plays a crucial role in the construction and shaping of the self (Fiske, Kitayama, Markus, & Nisbett, 1998). As such, psychological processes that determine the way an individual evaluates, and feels about certain aspects of their life are influenced by the culture in which they are brought up. Culture also influences individuals' evaluation of the quality of their life, by providing the standards through which they appraise their SWB (Suh, 2000).

In line with this argument, Diener and Suh (2000) discuss the issue of cultural relativismand its effect on perceptions of SWB across cultures. Cultural relativism is a principle that emphasizes that what is expected or valued in one culture may not be of importance in another. Diener and Suh (2000) emphasize that the ability of a culture to foster positive SWB in its members is not necessarily dependent on the achievement of universal standards. It is rather the achievement of values and goals that are deemed important by members of that culture. One example is research on self-esteem and SWB. While self-esteem has generally been shown to be highly correlated with SWB, and to be of high importance in Western cultures (Campbell 1981), Markus and Kitayama (1991) contend that self-esteem might not hold the same importance in other cultural settings. They argue that in collectivistic cultures, more emphasis is placed on fitting in and belonging, rather than on feeling good about oneself. Consistent with these arguments Diener and Diener (1995) found that while self-esteem was positively correlated with LS in all studied nations, the strength of the association was weaker for collectivistic ones.

While some researchers emphasize the culturally relative nature of SWB, others argue for the universality of SWB and its predictors. The self-determination theory, for example, argues that SWB is fostered and maintained by the fulfillment of three innate human needs: autonomy, competence, and relatedness (Ryan & Deci, 2000). The authors argue that cross-cultural differences in levels of SWB can be attributed to the cultures' ability to foster these fundamental human needs. Tov and Diener (2009) argue for the middle path to studying SWB, which acknowledges both universal and cultural specific predictors of SWB.

Ratzlaff, Matsumoto, Kouznetsova, Raroque, and Ray (2000)highlight that while it is important to study differences and similarities in the predictors of SWB across cultures, it is equally important to understand differences in the way people internalize and interpret their culture. Individuals within a culture show large variations in the extent to which they adopt cultural values, traditions, and practices. This line of study provides important insights for understanding the mechanisms through which cultural ideals and norms are internalized. These internalized ideals have a direct effect on an individual's subjective experience. In line with Ratzlaff et al. (2000), this thesis argues that the interaction between the individual and their larger culture plays a key role in determining their SWB.

Research on the relationship between goals, goal pursuit, and SWB provides a clear example of the importance of assessing the individual within their cultural context. Cantor and Sanderson (1999) emphasize the importance of goals in providing both meaning and structure to everyday life. For this reason, progress towards a goal or the achievement of it generally generates positive SWB. Alternatively, the inability to achieve a goal will diminish SWB. In addition, the type of goals a person has, affects

SWB. For instance, the environment in which one lives may either be conducive to goal attainment or alternatively hinder it. For this reason, having goals that are not valued or readily achievable in one's environment may diminish SWB. The environment may range from a small unit, such as one's family or work, to the larger cultural context in which he/she lives. Kasser (1996) found that goals that are typically predictive of SWB in the general population, such as affiliation or self-acceptance, were actually more predictive of depression in a sample of prisoners. This is because prisoners were in an environment that did not allow them to pursue their goals. Alternatively, prisoners who had goals that were readily achievable, such as physical fitness, had higher levels of SWB.

Cantor and Sanderson (1999) argue that possessing and committing to goals that are valued by one's culture is generally more conducive to well-being. While some goals may correlate positively with SWB in one culture, other goals are more relevant to other cultures. For example, Oishi and Diener (2009) found that pursuing goals for fun and enjoyment (conceptualized as goals pursued for independent motives) were more predictive of SWB for European American students than for Asian Americans, while goals pursued for relational motives (to please family and friends) were more predictive of SWB for Asian Americans.

The research on goal pursuit provides an example of the importance of assessing fit between the individual and their larger environmental context. While goal achievement is generally predictive of SWB in most situations, it is equally important to take into account the context within which these goals are pursued. The findings of research on goals and SWB provide insight into the role of value congruence in predicting SWB.

C. Perceived Stress

Stress and coping are central research areas in health and social psychology (Wheaton, 1999). Stress is defined as a negative state that is the product of disproportionate taxing demands that go beyond the individual's adaptive resources (Vermunt & Steensma, 2005). Stress is usually conceptualized as any demand, be it social, environmental, psychological, or biological, which requires the individual to change their usual patterns of behavior. The purpose of these changes is either to alter the stressor, or alternatively accommodate to it (Carr & Umberson, 2013). Recent research on stress in human subjects focuses primarily on the effects of social stressors (Taylor, 2010).

Social stressors are divided into three main categories: life events, chronic strains, and daily hassles (Carr & Umberson, 2013). Life events consist of serious life changes that require an individual to make significant adjustments to their life in a short period of time. The degree to which a specific life event is perceived as stressful depends on the following four characteristics: magnitude of the change, desirability, expectedness, and timing. For example, losing a spouse can be stressful under any circumstances. However, it is significantly more stressful when it is early and unexpected (George, 1999).

The second type of social stressor, chronic strains, is defined as " persistent and recurring demands that require adaptation over sustained periods" (Carr & Umberson, 2013, p.466). Chronic strains are generally found to have more negative effects on health than specific life events, with the exception of traumatic life events, such as sexual assault (Turner, Wheaton, & Lloyd, 1995). Examples of chronic strains are unsuccessful marriages, an overly demanding job, or living in a dangerous and

uncomfortable neighborhood (Carr & Umberson, 2013). Chronic strains have generally been divided into three types: status, role, and ambient strains. Status strains are attributed to the individual's position in the social structure. Belonging to specific socioeconomic statuses, such as poverty, or an ethnic minority group, are common examples of status strains. Role strains arise when there is conflict related to one's social role, for example, when attempting to cope with both work and family demands. Ambient strains refer to chronic stressors in the environment, such as pollution or noise (Carr & Umberson, 2013).

The third category of social stressor, daily hassles, refers to minor experiences that occur throughout the day that require adjustments, for example traffic. The result of stress that comes from daily hassles is usually expected to dissipate in a few days. However, recurring daily hassles can turn into chronic strains, and may contribute to the cumulative effects of stress on both mental and physical health (Carr & Umberson, 2013).

Earlier research on stress focused on measuring stress objectively. One popular method was to measure the occurrence of stressful events within a certain time frame, for example 6 months (Cohen, Kamarck, & Mermelstein, 1983). This approach assumes that stress is inherent in specific situations. While these measures have various advantages, their main disadvantage is that they do not take into account the individuals' subjective appraisal of the event, or their coping abilities. Cohen et al. (1983) argue that stress is an emotional response caused by the individual's cognitive appraisal of an event, and not by the event itself. As such, several subjective measures of stress were developed that assessed the individuals' appraisal of specific stressful events.

Both the objective and subjective measures of stress that focus on specific stressful events are limited in that they do not account for other possible stressors. These other stressors can arise from chronic stress from ongoing life-events, non-specific factors, stressful events that occur in the lives of important others, the anticipation of stress from future events, or events not listed in the scale. Global measurements of subjective stress, such as the Perceived Stress Scale (Cohen et al., 1983), were developed to address these limitations. These measures do not allude to specific events or situations, and as such can assess the overall levels of stress of the individual.

The outcomes of stress and stressors have been abundantly researched. Stress has predictable physiological, psychological, and emotional consequences (Carr & Umberson, 2013). Earlier research generally examined physiological consequences of stress, such as exhaustion (Selye, 1956). More recent social psychological research focuses on the psychological and emotional outcomes of stress. For example, a wealth of studies examine the link between stress and various psychological disorders, such as anxiety and depression (Ghorbani, Krauss, Watson, & LeBreton, 2008). The relationship between stress and quality of life has also been established. Perceived stress is negatively associated with life-satisfaction, for example (Alleyne, Alleyne, & Greenbridge, 2010; Matheney et al., 2002). A primary aim of this thesis is to examine the relationship between stress and SWB in relation to value congruence.

D. Culture and Values

According to Smith, Bond, and Kagitcibasi (2006), when the members of a social system share similar values and beliefs, they are also likely to interpret behaviors in similar ways. For the authors, this shared interpretation of behavior by a social group

is the defining criterion for the existence of a culture. It is for this reason that the study of values in a particular culture is the most popular way to study cross-cultural differences (Smith et al., 2006). Values provide guidelines towards understanding the motivational goals of individuals' within a culture. Schwartz (1992) defined values as "1) concepts or beliefs, *(which)*2) pertain to desirable end states or behaviors, 3) transcend specific situations, 4) guide selection or evaluation of behavior and events, and 5) are ordered by relative importance" (p. 4). Values are developed throughout childhood and adolescence and remain generally stable both across situations and across one's lifetime. They have functional significance in that they direct attention, serve as motivators of behavior, justification for action, and they provide standards with which to judge oneself and others, or specific situations (Schwartz, 1994).

In a comprehensive set of studies spanning over 20 countries, Schwartz (1992, 1994) found empirical support for the universality of 10 value types: Self-Direction, Stimulation, Hedonism, Achievement, Power, Security, Conformity, Tradition, Benevolence, and Universalism (see Table 1 for a complete definition with examples of each value). Values are organized in a circular structure that emphasizes their dynamic relationship (see Figure 1). Adjacent values are complementary (e.g., Self-Direction and Stimulation) while opposing values represent contradictory goals (e.g., Universalism and Power). The circle can be divided into values that serve the individual (Self-Direction, Stimulation, Hedonism, Achievement, Power), and those that serve the collective (Security, Conformity, and Tradition).

Table 1: Schwartz Value Types Definitions	
Value Type	Motivational Goal
Power	Social status and prestige, control or dominance over people and resources
Achievement	Personal success through demonstrating competence according to

	social standards
Hedonism	Pleasure and sensuous gratification for oneself
Stimulation	Excitement, novelty, and challenge in life
Self-Direction	Independent thought and action - choosing, creating, exploring
Universalism	Understanding, appreciation, tolerance, and protection for the welfare of all people and nature
Benevolence	Preservation and enhancement of the welfare of people with whom one is in frequent personal contact
Tradition	Respect for, commitment to, and acceptance of the customs and ideas that traditional culture or religion impose on self
Conformity	Restraint of actions, inclinations, and impulses likely to upset or harm others and to violate social expectations or norms
Security	Safety, harmony, and stability of society, of relationships, and of self

Table adapted from Schwartz (1994)

Figure 1: Schwartz's Circumplex Model of Value Types
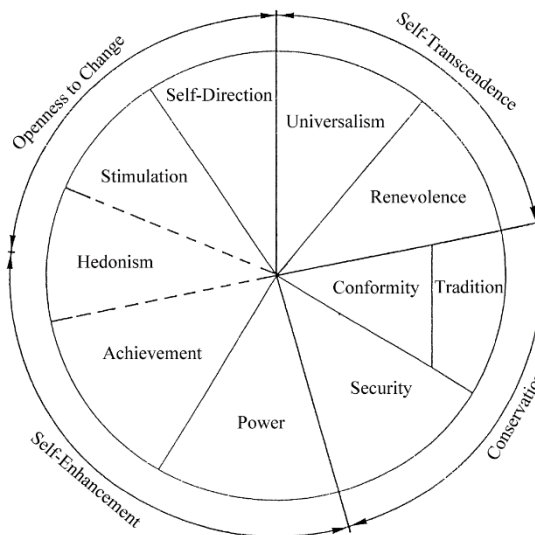
The circumplex structure of the 10 values can be further divided into two pairs of opposing higher order value types. The first pair pits Openness to Change against Conservation. Openness to Change refers to values that promote an individual's personal, emotional, or intellectual interests, such as the value types for Stimulation and Self-Direction. Conservation refers to values that serve to maintain the status quo, namely Security, Conformity, and Tradition. The second pair consists of Self-Enhancement vs. Self-Transcendence. Self-Enhancement refers to the promotion of a

person's personal status (Power and Achievement). Self-transcendence consists of values that motivate the promotion of the welfare of others (Universalism and Benevolence) (Schwartz, 1994). One distinction between Universalism and Benevolence is that while the former represents a value that serves all people, benevolence more generally is related to serving one's own ingroup.

Values are a popular way to study and map culture for various reasons, the principal of which being the systematic way that values and value structures have been constructed and studied. Values have generally been shown to have equivalence in both meanings and structure across the majority of cultures studied (Schwartz, 1992). For this reason, they provide researchers with an empirically and theoretically valid approach to study and compare the motivational goals of people across cultures. Furthermore, mapping an individual's value priorities sheds valuable insights into the beliefs that are important to them as well as the goals s/he is likely to pursue. Understanding an individual's values in relation to that of their environment provides information on how that person functions in that environment. This thesis explores the importance of having congruence between the individual's values and those of their larger environment. Drawing on comparisons between research on goals and values, this thesis argues that having values that are incongruent with those of the larger culture may prove a hindrance to their achievement. This will in turn negatively influence SWB.

E. Value Congruence, Subjective Well-Being, and Stress

"The self and the social relations of a given community are mutually constitutive and … being a self amounts to being part of the attendant social relations. To 'be well' requires an attunement between the self and the social relations that are

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organized and maintained by the cultural practices and meanings of a community" (Kitayama & Markus, 2000, p. 114).

Kitayama and Markus (2000) propose a model of attunement, whereby well-being is determined at least in part by the fit, or attunement, between the individual and their culture. Given the different cultural orientations of a group, an individual must, to some extent, internalize these cultural standards to "fit" effectively in their culture. Similarly, Lu (2006) argues that conceptions of cultural fit are important in the research on SWB in at least two ways. First, looking at fit allows a better understanding of an individual's behavior and attitudes within a cultural context. Second, the more an individual's behaviors and attitudes are congruent with that of the society within which he/she lives, the smoother the interaction between the two will be. Conversely, large discrepancies between an individual and their group will result in potential conflict or distress, which will serve as a hindrance to well-being.

Given the importance of values in influencing the way a person feels, evaluates, and behaves in their environment, this section reviews the literature on fit, focusing specifically on value congruence between the individual and their group. Sagiv and Schwartz (2000) outline three mechanisms by which discrepancy between the values of the individual and those of their larger context may lead to decreased levels of SWB. The first mechanism is through environmental affordances, whereby the environment provides both obstacles and opportunities towards goal attainment. When one's goals are in congruence with those of the environment, they will be more likely to have the opportunity to achieve them. Alternatively, if incongruence occurs, goal achievement will be hampered. The second mechanism refers to social sanctions in which environments are viewed as sets of norms or expectations that people generally abide

by. If a person acts in a way that is incongruent with these norms, they may be socially punished by being ignored, or ostracized. Finally, internal conflict may occur due to incongruence between the values that a person already holds and those that a new environment encourages. Incompatible sets of values within an individual may create internal conflict.

Sagiv and Schwartz (2000) measured value congruence by looking at differences in value priorities of psychology and business students, and the values that are generally endorsed by students in their departments. They found that students tend to experience higher levels of SWB when their value priorities match those of their prevailing environment. For psychology students, the relevant values were those of Universalism and Benevolence, while for business students, the most important values were those of Power and Achievement. Similarly, research conducted by Ratzlaff et al. (2000) also lends support to the attunement model of SWB. Participants were asked to rate themselves on each value and rate their perceptions of the values of their society. The discrepancy between these scores was computed. Participants also filled out measures of well-being, and their use of various coping styles. The results indicated that there was a positive correlation between the use of various coping strategies (escape avoidance, seeking social support, and positive reappraisal), and value incongruence. Value incongruence was conceptualized as a large discrepancy between self-rated values and those of the society. The use of these coping styles in turn correlated negatively with well-being and positively with anxiety and depression.

Research assessing the effects of value congruence on SWB is also informed by research assessing the importance of congruence in promoting self-esteem. In a sample of over 4500 participants from 20 cultural samples, Becker et al. (2014) found that

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participants' bases for evaluating their self-esteem were moderated by the normative value priorities of their cultures. For example, in cultural contexts where conservation value was more prominent, individuals derived their self-esteem most from doing their duty. These findings are in line with several theoretical approaches that underline the importance of value congruence between the individual and their cultural environment to the development of self-esteem. For example, both terror management theory and the self-concept enhancing tactician model argue that individuals will derive their positive self-image from the embodiment of values that are seen as important to their culture, and that have been internalized (Pyszczynski et al., 2004; Sedikides & Strube, 1997).

While research assessing the effects of value congruence between the individual and their cultural environment has scarcely been studied, there is a wealth of studies that look at value congruence in work settings. Value congruence has emerged as one of the dominant conceptual frameworks studied in Industrial and Organizational psychology (Kristof-Brown & Guay, 2010). Kristof-Brown, Zimmerman, and Johnson (2005) outline four different work contexts studied in this line of research, the fit between the person and their: organization, job, group, and supervisor. Person-environment (P-E) fit in the organizational literature is conceptualized in various ways, ranging from values or goals of the person and those endorsed by the organization, individual needs, expectations, overall atmosphere of the work setting, and even to a match in the personality between the individual and supervisor. The most empirically studied and supported method of measuring P-E fit looks at value congruence between the individual and their environment (Verquer, Beehr, & Wagner, 2003).

There has been an abundance of studies in Industrial and Organizational psychology that have emphasized the importance of fit for both the individual and the

organization. A good P-E fit in the workplace is directly related to better performance, and increased length of stay in the organization. Good P-E fit is also linked to a more positive work attitude (Arthur, Bell, Villado, & Doverspike, 2006; Hoffman & Woehr, 2006; Verquer, Beehr, & Wagner, 2003) and has been shown to be a predictor of perceived stress and well-being (Van Vianen, 2001).

Just as P-E congruence is important for well-being, incongruence has been shown to be directly related to stress. "A perceived match between the person and environment is beneficial to mental and physical well-being, whereas a perceived mismatch signifies stress, produces mental and physical strain (i.e., damage to well-being), and stimulates efforts to resolve P-E misfit" (Edwards & Rothbard, 1999, p. 87). Stress is usually conceptualized as a negative state that is the product of disproportionate taxing demands that go beyond the individual's adaptive resources (Vermunt & Steensma, 2005).

Dbaibo, Harb, and van Meurs (2010) conducted a study in which they explored the impact of person-organization value congruence in the work context, and its effect on stress levels in a Lebanese sample. The authors measured congruence by asking participants to simultaneously rate how much they endorse a value and how they perceive a typical member of their organization would respond. The authors found partial support for value incongruence between the individual and organization for three value types: Benevolence, Self-Direction, and Power. In general, participants indicated an increase in stress when they felt others in the organization were lower in Benevolence and Self-Direction but higher on Power than themselves. While the study provides important results, it is unlikely that the same pattern of results would replicate in a non-work setting. This is primarily because the values that are likely to contribute to a positive working environment may not hold the same relevance outside the work

context. Furthermore, as in most research on P-E fit, only stress, and not well-being, was measured.

Theories of attunement and fit emphasize the importance of fit to both SWB as well as stress (Edwards & Rothbard, 1999), yet generally, most research do not measure the two in the same study. While the promotion or decrease in SWB and stress may come about through differing mechanisms, it is also likely that these mechanisms are related. A central aim of this study is to assess the relationship between stress and SWB in the context of value congruence.

CHAPTER II

AIM OF THE STUDY

A. Research Question and Aims

This study explored the relationship between value congruence, SWB and perceived stress in a Lebanese university student sample. Since all other measures used in the study are cognitive evaluations, for the sake of consistency and parsimony, only the cognitive component of SWB, LS, was used. Perceived stress was hypothesized to mediate the relationship between value congruence and SWB. Specifically, value incongruence between the individual and their context increases stress, which would in turn negatively affect SWB.

The contexts of comparison used were family, university, and national contexts. These contexts were chosen because of their specific relevance to the Lebanese youth identity. The family holds a central position in Lebanese culture. Lebanese generally rank family as one of the most important institutions to them, and family engenders loyalty, conformity, and the upholding of the family's honor (Kazarian, 2005). This is reflected in the high endorsement of family identity by the Lebanese youth (Harb 2010).

This sub-population also identifies strongly with its national Lebanese identity (Harb, 2010). Comparison between participants and their fellow university students was also conducted. For many participants, a large amount of time and energy is invested in their university, whether academically or through student life. Therefore, an assessment of value fit between participants and their fellow university students may prove to be an important context for fostering SWB.

It remains unclear whether LS and perceived stress are affected by the priority of the value-type or the magnitude of the value discrepancy between the individual and their environment. In other words, is it the size of the discrepancy that predicts PS and LS, irrespective of value type? Or rather, is it the centrality of the value type to the specific context? Previous research on a Lebanese sample (Dbaibo et al., 2010) has yielded inconsistent results in this respect. This study aimed to shed light on which specific aspect of value incongruence affects LS and perceived stress.

B. Hypotheses

The following sets of hypotheses are proposed:

Hypothesis 1: Value discrepancies between the individual and their parents will have a negative relationship with LS and a positive relationship with perceived stress.

Hypothesis 2: Value discrepancies between the individual and their fellow university students will have a negative relationship with LS and a positive relationship with perceived stress.

Hypothesis 3: Value discrepancies between the individual and their fellow Lebanese nationals will have a negative relationship with LS and a positive relationship with perceived stress.

*Hypothesis 4:*Perceived stress will mediate the relationship between P-E value incongruence and LS in each of the three contexts (parents, AUB students, and Lebanese nationals).

CHAPTER III

METHODS

A. Participants

Two hundred and seventy two students from the American University of Beirut (AUB), enrolled in Introduction to Psychology course (Psychology 201) participated in this study. Forty-six of these participants did not meet the recruitment criteria of being Lebanese and over 18, and were excluded from the analysis. Students were asked to participate in the study in exchange for class credit as per AUB IRB Psychology 201 pool protocol.

B. Procedure

An advertisement describing the research was sent to the students. All students were sent an invitation and a link to participate in the research study via their university emails. After providing consent (Appendix A), participants were asked to fill out a survey (Appendix B) that measures their values and their perceptions of the values of their parents, AUB students, and Lebanese nationals. Participants who completed the battery of questionnaires were identified using a unique identifier on LimeSurvey. Only the Academic Core Processes and Systems (ACPS) at AUB, and the Psychology 201 Coordinator were given access to the names of students that had participated. The names were not connected in any way to responses. All procedures were carried out in accordance with guidelines of the Institutional Review Board (IRB) of the AUB. A pilot study consisting of 10 AUB students was conducted prior to the actual study. The

purpose of the pilot study was to test the length of the survey as well as to check for the appropriate understanding of survey items and instructions.

C. Instruments

A battery of instruments was used to assess values, life satisfaction, perceived stress, and socio-demographic variables. Two versions of the survey were used to check for order effects. In one version, perceived stress, LS, and identity were measured first, and value congruence last. In the second version, value congruence was measured first, followed by perceived stress, LS, and identity. All instruments were administered in English.

Values. The Basic Human Values Scale (Schwartz, 2002) is based on the universal theory of values as proposed by Schwartz (1992, 1994). It consists of 21 items measuring the four higher order value types (Openness to Change, Conservation, Self-Enhancement, and Self-Transcendence). Two additional emically derived value items were added, measuring "honor" and "hospitality" that have been shown to be important in Arab cultures, corresponding to the emic Arab value (Harb, 2010). Participants were asked to rate on a 5-point Likert scale (1 = not at all like me/my family/AUB students/Lebanese; 5 = very much like me/parents/AUB students/or Lebanese nationals) how much the description resembled themselves, their parents, AUB students, and Lebanese nationals. Values of the individual and perceived values of parents/AUB students/and Lebanese nationals were measured concurrently, and participants were asked how much they rated the description as applying to them versus their parents/fellow AUB students/or Lebanese nationals (see Appendix B, Section I). This scale has already been validated and used in Lebanese and Iraqi samples (Fisher, Harb, Al-Sarraf, & Nashabe, 2008; Harb, 2010).

Value congruence. Differences between the participant's self scores and what their perceptions of their parents, AUB students, and Lebanese nationals value scores were computed to measure value incongruence for the four higher order value types and the emic Arab value.

Life satisfaction. Satisfaction with Life Scale (Diener, Emmons, Larsen, & Griffin, 1985) was used to assess the cognitive aspect of SWB, life satisfaction. The scale consists of 5 items with responses on a 5-point Likert type scale ranging from 1 (strongly disagree) to 5 (strongly agree) (see Appendix B, Section III). The scale has been translated to Arabic and validated in a Lebanese university sample with alpha coefficient of .77 (Ayyash-Abdo & Alamuddin, 2007).In this study, the English version of the scale was used and had a high reliability with a chronbach's alpha of .79 (see Appendix C).

Perceived Stress. Perceived Stress Scale (Cohen, Kamarck, & Mermelstein, 1983), a 14-item measure was used to assess the degree to which a person perceives situations in their life as stressful. The Perceived Stress Scale measures global perceptions of perceived stress, including stress that may arise from all three types of social stressors (significant life events, chronic strains, and daily hassles). The items are rated on a 5-point likert type scale ranging from 1 (never) to 5 (very often) (see Appendix B, Section II). This scale has been previously translated to Arabic and validated. In this study, the scale was used in English and had a very good reliability with a chronbach's alpha of .81 (see Appendix C).

Socio-demographic variables. Gender, age, and socioeconomic status were measured using 1 item each (see Appendix B, Section V). A detailed description of the socio-demographic characteristics of the sample can be found in Appendix D.

CHAPTER IV

RESULTS

The results consist of 3 main sections. The first section deals with data cleaning and preparation, the second section consists of general descriptives, and the third section consists of two sets of regression analyses assessing the predictors of perceived stress and life-satisfaction. Variables included in the results are the average perceived stress scores (PS), average life-satisfaction scores (LS), the emic Arab value, the four higher-order value types (Self-Enhancement, Self-Transcendence, Conservation, and Openness to Change) across the four comparison contexts (self, parents, AUB students, and Lebanese), and the 15 discrepancy scores. To be concise, discrepancy scores between self-rated values and the three comparison contexts (perceived parental endorsement, endorsement by AUB students, and endorsement by Lebanese) will be abbreviated as Discrepancy – Value – SP, SA, or SL respectively. For example, the discrepancy between self-rated Self-Enhancement scores and perceived endorsement by AUB students will be abbreviated as Discrepancy – Self Enhancement – SA.

A. Preliminary Analysis:

1. *Missing Value Analysis*

A missing value analysis was conducted using missing value analysis syntax (MVA) on SPSS. The items for the PSS and SWLS had less than 5% missing values. However, all items for the 11 value types across the four comparison contexts (self, parents, AUB students, and Lebanese) had missing values above 5%, with a maximum of 10.29%.Little's MCAR test was used to assess whether the missing values were missing completely at random. The test was not significant, χ^2 (3737)=3655.27, p>.05, indicating that the missing values for all values items were missing at random.

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2. *Univariate and Multivariate Outliers*

The four self-rated higher order value types (Self-Enhancement, Self-Transcendence, Conservation, and Openness to Change), the self-rated emic Arab value, and the fifteen discrepancy scores, LS scores, and PS scores, were assessed for univariate and multivariate outliers. Standardized z-scores were computed and any z-score with a value above |3.29| was considered a univariate outlier at the p<.001 level. Multivariate outliers were examined through Mahalanobis distance using SPSS syntax with a p<.001 criterion. Any value greater than χ^2 (21)=46.80 was considered a multivariate outlier. Twenty-four univariate outliers were found with several repeating case numbers. Eight multivariate outliers were found, and corresponded to 10 univariate outliers, due to repeating case numbers of univariate outliers. All 8 multivariate outliers were subsequently deleted from the dataset, leaving a sample size of 218.

B. Descriptives

1. *Sample Size*

The current study consisted of a final sample size of 218 participants. However, using listwise criteria for missing values left the sample size for the regression analyses at 205 participants. When testing for a medium size relationship between individual predictors and the outcome, Tabachnick and Fidell (2007) recommend that the sample size be larger than (104 + m), where m corresponds to the number of predictors. Considering that the largest analysis includes 20 independent predictors in a regression, a sample size of 205 is well above the recommended 124.

2. *Normality*

The assumption of normality was assessed for all variables by computing z-scores of skewness. Variables with z-scores above |3.29| were considered non-normally

distributed. Six variables had z-scores of skewness above |3.29| (reported in Table 2),

which violated the assumption of normality. All other variables were normally

distributed (see Appendix E). Self-rated Self-Transcendence, Openness to Change, and

emic Arab value, had serious violations of the assumption of normality. These

violations may affect our analysis by weakening the robustness of the regression model.

No transformations were performed, however, since the assumptions for the regression

analyses were met (see p. 30-31).

Table 2 - Normality

Variable	Z-Skewness
Self-Transcendence - Self	-7.83
Self-Enhancement - Self	-3.33
Openness to Change - Self	-6.29
Arab - Self	-6.09
Discrepancy – Self Enhancement – SL	3.69
Discrepancy – Conservation – SP	-3.46

3.*Means and Standard Deviations*

Means (M) and standard deviations (SD) were computed for PS, and LS, the 4

higher-order value types and the emic Arab value, across the 4 contexts - self, parents,

AUB students, and Lebanese nationals (see Tables 3 and 4). On average, respondents'

LS scores were above the midpoint of 3 (M=3.26, SD=.75), indicating moderate levels

of life-satisfaction. Their average ratings of PS were only slightly above the midpoint of

3 (M=3.05, SD=.49) indicating that respondents were also moderately stressed.

The means of the four higher order values, and the emic Arab value, across the

four contexts were graphed on a radar plot for a visual representation of value

endorsement and discrepancies between contexts (see Figure 2). The radar plot clearly

shows the differences in value profiles between self-rated values and perceived value

endorsement by participants' parents, fellow AUB students, and Lebanese nationals.

On average, participants scored highest on Openness to Change, Self-Transcendence, and the emic Arab value. This indicates that participants generally value the pursuit of personal, emotional, or intellectual interests that are important to them. They also place high importance on the promotion of welfare of others, and on honor and hospitality. On the other hand, they rated themselves lowest on Conservation, meaning that they placed least importance on values that aim to maintain the status quo, such as Tradition, Conformity, and Security. Parents, however, were perceived to be highest on Conservation, and the emic Arab value. They were also much lower on Openness to Change. AUB students were perceived to have the highest levels of Self-Enhancement, but were lower than participants on all other values. Lebanese nationals were perceived to have the lowest endorsement of all values, except Self-Enhancement. This suggests that participants perceived AUB students and Lebanese to place importance on the achievement of personal success, as well as social status, prestige, and control over people or resources.

Discrepancies between self-rated values and those of parents, AUB students, and Lebanese are also visually represented on the radar plot. Large discrepancies existed between participants' ratings of Openness to Change and their perception of their parents and Lebanese nationals endorsements. This indicates that participants perceived that both their parents and Lebanese nationals place less importance on independent thought and action, and the pursuit of novel or exciting challenges, than themselves. Participants also rated themselves as much higher on Self-Transcendence than their fellow AUB students and Lebanese nationals. This suggests that participants believed both AUB students and Lebanese nationals cared less for the welfare of others than themselves. In addition, participants rated themselves as higher on the emic Arab value,

than Lebanese nationals. Thus, they believed that honor and hospitality are more central

to them than to the Lebanese nationals.
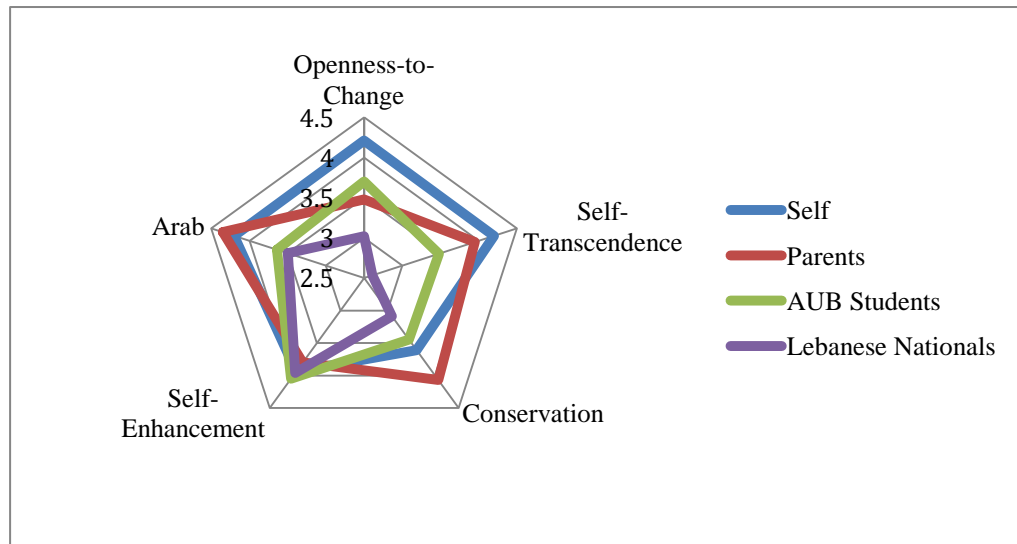
Figure 2: Radar Plot of Value Profiles

Table 3: Descriptives - Higher Order Values

Variable	Self		Parents		AUB Students			
	N	Mean (SD)	N	Mean (SD)	N	Mean (SD)	N	Mean (SD)
Openness-to-Change	216	4.21 (.68)	215	3.48 (.67)	213	3.70 (.66)	213	3.02 (.71)
Conservation	213	3.61 (.72)	212	4.07 (.58)	212	3.45 (.49)	212	3.09 (.62)
Self-Transcendence	214	4.20 (.64)	213	3.95 (.62)	212	3.48 (.66)	212	2.61 (.70)
Self-Enhancement	214	3.94 (.68)	213	3.80 (.65)	212	4.05 (.55)	213	3.96 (.71)
Arab	210	4.20 (.73)	208	4.35 (.66)	207	3.64 (.76)	207	3.50 (.84)

Table 4: Descriptives

Variable	N	Mean (SD)
Life-Satisfaction	218	3.26 (.75)
Perceived Stress	217	3.05 (.46)
Discrepancy – Openness to Change – SP	215	0.72 (.84)
Discrepancy – Conservation – SP	212	-0.47 (.59)
Discrepancy – Self-Transcendence – SP	213	0.24 (.55)
Discrepancy – Self-Enhancement – SP	213	0.14 (.62)
Discrepancy – Arab – SP	208	-0.15 (.56)
Discrepancy – Openness to Change – SA	213	0.51 (.86)
Discrepancy – Conservation – SA	212	0.16 (.71)
Discrepancy – Self-Transcendence – SA	212	0.71 (.75)
Discrepancy – Self-Enhancement – SA	212	-0.11 (.69)
Discrepancy – Arab – SA	207	0.55 (.81)
Discrepancy – Openness to Change – SL	213	1.19 (.95)
Discrepancy – Conservation – SL	212	0.51 (.85)
Discrepancy – Self-Transcendence – SL	212	1.58 (.86)

Discrepancy – Self-Enhancement – SL	213	-0.02 (.94)
Discrepancy – Arab – SL	207	0.69 (1.03)

4. *Correlations*

Several Pearson's correlations were run to assess the relationship between LS and PS, and the relationships between the higher order values, and the emically derived Arab value, across the four comparison contexts (self, parents, AUB students, Lebanese nationals). In addition, the correlations between the 15 discrepancy scores and PS and LS were also assessed (see Table 5 for significant correlations).

LS and PS were negatively correlated, r=-.43, p<.01, with a moderate to large relationship. PS was also significantly positively correlated with the perceived Self-Enhancement of both AUB students, and Lebanese nationals, r=.15, p<.05, with a small effect size. The more participants perceived AUB students and Lebanese nationals to value personal success (Achievement), social status, and control of others' resources (Power), the more stress the participants experienced. Value discrepancies, however, were not correlated with PS. This last finding disconfirms our hypotheses that value discrepancies will be positively related to PS (hypotheses 1-3). In addition, this suggests that PS does not mediate the relationship between value discrepancies and LS (hypothesis 4).

LS was positively correlated with self-rated emic Arab value, r=.14. p<.05, indicating that the more individuals perceived themselves as hospitable and honorable, the higher their life-satisfaction. Also, self-rated and perceived parental endorsement of Self-Transcendence, r=.21, and r=.29, p<.01, were positively correlated with LS, with small to medium effect sizes. The more participants perceived themselves and their parents to be high on benevolence and universalism, the higher their life-satisfaction.

Perceived parental endorsement of Openness to Change, r=.23 p<.01, was also positively correlated with LS. The more participants perceived their parents to value independent thought and action (Self-Direction), and new and exciting experiences in their lives (Stimulation), the higher the participants' life-satisfaction. Finally, perceived Self-Enhancement scores for Lebanese nationals were negatively correlated with LS, r=-.14, p<.05, with a small effect size. This indicates that the more participants perceived Lebanese nationals to value Self-Enhancement, the lower the participants' life-satisfaction.

LS was also positively correlated with four value discrepancies. Discrepancies between self-rated Self-Enhancement and perceived endorsement by AUB students and Lebanese nationals, were positively correlated with LS, r=.18, and r=.17, p<.05 respectively, with small effect sizes. The more participants viewed themselves as driven by power and achievement, and the less they viewed AUB students and Lebanese nationals to be motivated by Self-Enhancement, the higher the participants' LS. Also, discrepancies between self-rated Self-Transcendence, and perceived endorsement by AUB students was positively correlated to LS, r=.14, p<.05, with a small effect size. As individuals rated themselves as higher on Universalism or Benevolence, or perceived AUB students to be lower on Self-Transcendence, their LS increased. Finally, discrepancy scores between self-rated emic Arab values and perceived endorsement by the Lebanese nationals was positively correlated with LS, r=.18 p<.01. The more participants perceived themselves to be high on honor and hospitality, and the lower they perceived the Lebanese nationals to endorse these values, the higher their LS.

These findings lend partial support to our hypotheses (2-3) that value discrepancies will be related to LS. The relationship between value discrepancies and

LS, however, was not negative. The effect on LS depended on the direction of the discrepancy. In addition, there was no support for hypothesis 1, that value discrepancies between the participants and their parents would negatively predict LS.

Table 5: Correlations of Perceived Stress and Life-Satisfaction

	PSS	LS
PSS		-.43**
Arab - Self		.14*
Openness to Change - Parents		.23**
Self-Enhancement - AUB	.15*	
Self-Enhancement - Lebanon	.15*	-.14*
Self Transcendence - Self		.21**
Self Transcendence - Parents		.29**
Discrepancy - Self Enhancement - SA		.18**
Discrepancy - Self Enhancement - SL		.17*
Discrepancy - Self Transcendence - SA		.14*
Discrepancy - Arab - SL		.18**

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

C. Order Effects

To test for order effects, the two counterbalanced versions of the survey were assessed for differences on LS and PS using two independent samples t-tests. There were no significant order effects on either LS, $t(216)=.06$, $p>.05$, or PS, $t(215)=1.09$, $p>.05$.

D. Predictors of Perceived Stress and Life Satisfaction

To test the hypotheses that discrepancy scores would be related to PS and LS, two hierarchical regressions were run to test for the effect of self-rated higher order values (Self-Enhancement, Self-Transcendence, Conservation, and Openness to Change), the self-rated emically derived Arab value, and the 15 value discrepancies on PS and LS respectively. The self-rated values were entered first to establish the importance of that value to the participant, before assessing for the effects of value

discrepancies. The forward method of entry was chosen because of the exploratory nature of the regression analyses.

1.*Assumptions*

The assumptions of regression were assessed for both analyses and will be jointly reported.

a. Linearity, Homoscedasticity

The assumptions of linearity and homoscedasticity were assessed by plotting a scatterplot of z-predicted over z-residuals. The assumptions were met for both analyses, which is indicated by the oval shape of the scatterplots, the concentration of scores in the center, and the lack of funneling or directionality in the scatterplots.

b. Independent Errors

The assumption of independence of errors, assessed by checking the Durbin Watson statistic, was met for both analyses, with 1.78 for LS and 1.91 for PS.

c. Multicollinearity

The assumption of multicollinearity was assessed by checking the zero-order correlations between all variables in the regressions, the VIF, and the tolerance statistics. There were no significant zero-order correlations above r=.80, and VIF and tolerance were both around 1, indicating a lack of multicollinearity.

d. Influential Cases

The presence of influential cases that affect the parameters of the regression model was assessed by checking standardized DFBetas, as well as by visually inspecting the scatterplots of z-predicted over z-residuals. For both analyses, standardized DFBeta scores were below |1|. However, two influential cases were found through scatterplots, and were subsequently removed from the analysis.

e. <u>Normally Distributed Errors and Normality of the Dependent Variable</u>

The assumption of normally distributed errors was assessed by visually inspecting histograms and normal probability plots of standardized residuals. Both plots showed normal distributions.

The assumption of normality was assessed for PS and LS by computing z-scores of skewness. Variables with z-scores above |3.29| were considered non-normally distributed. Both variables were normally distributed with z-scores below |3.29|.

2. *Predictors of Perceived Stress*

The 5 self-rated values (emic Arab, Self-Enhancement, Openness to Change, Self-Transcendence, and Conservation) were entered into the first block of the multiple regression using forward entry. The 15 discrepancy scores on all three dimensions (SP, SA, SL) were entered into the second block also using the forward method. PS was entered as the dependent variable. None of 5 self-rated values, or the 15 discrepancy scores, significantly predicted PS. The regression model was not significant, indicating no relationship between perceived stress, self-rated values, and value discrepancy. This partially disconfirms our hypotheses that value congruence will predict PS (hypotheses 1-3), and that PS will mediate the relationship between value congruence and LS (hypothesis 4).[1]

3. *Predictors of Life Satisfaction*

A regression analysis was first conducted with the 5 self-rated values (Self-Enhancement, Openness to Change, Self-Transcendence, Conservation, and the emically derived Arab value) entered into the first block of the multiple regression

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[1] The regression model for the predictors of PS differed from those of LS for two reasons. There were no significant zero order correlations between value discrepancies and PS, and no suppressor effects. For this reason, all value discrepancies were entered into the regression.

using forward entry. The 15 discrepancy scores across the 3 comparison contexts (SP, SA, and SL) were then entered into the second block also using the forward method. This model proved problematic because of the appearance of a suppressor effect (see Appendix F for results). As recommended by Schwartz (2007), we did not include all the values in the regression, rather only discrepancy scores that had significant zero-order correlations with LS were included in the second analysis, reported below. This is to control for the circular structure of values.

In the second, and main, regression analysis, the 5 self-rated values (Self-Enhancement, Openness to Change, Self-Transcendence, Conservation, and the emic Arab value) were entered into the first block of the multiple regression using forward entry. The four discrepancy scores that were significantly correlated with LS (Discrepancy – Self Enhancement – SA, Discrepancy – Self Enhancement – SL, Discrepancy – Self Transcendence – SA, and Discrepancy – Arab – SL) were entered into the second block also using the forward method. LS was entered as the dependent variable. The regression model was significant, $F(1, 202)=11.14$, $p<.01$, and accounted for a total of 9% of the variance explained($R^2=.09$). Adjusted $R^2=.08$, indicated a shrinkage of only 1% of the predictive power when extrapolating from the sample to the population (see Table 6).

The standardized Beta coefficients of the model indicate that Discrepancy – Self Enhancement – SA, $\beta=.22$, $t(206)=3.34$, $p<.01$, was the largest predictor followed by Self-Transcendence – Self, $\beta=.20$, $t(206)=3.02$, $p<.01$ (see Table 7). The positive relationship between Discrepancy – Self Enhancement – SA with LS indicated that as the magnitude of the discrepancy increased, LS increased. The more individuals rated themselves as power and achievement driven, and the less they perceived AUB to be

motivated by Self-Enhancement, the higher their LS. In addition, the higher an

individual rated themselves on Universalism and Benevolence, the higher their LS.

These results only partially supported hypothesis 2. Only one value discrepancy

between the participants and AUB students predicted LS. Also, the effect of the

discrepancy on LS was dependent on the direction of discrepancy. The results, however,

do not support hypotheses 1 or 3, that value discrepancies between participants and their

parents and Lebanese nationals would predict LS.

Table 6: Predictors of Life Satisfaction -Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.19	.04	.03	.73	.04	7.98	1	203	.01
2	.30	.09	.08	.71	.05	11.14	1	202	.00

Table 7: Predictors of Life Satisfaction - Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
	(Constant)	2.23	.36		6.28	.00
2	Self Transcendence - Self	.25	.08	.20	3.02	.00
	Discrepancy - Self Enhancement - SA	.26	.08	.22	3.34	.00

CHAPTER VI

DISCUSSION

The main objective of this study was to contribute to the existing literature on P-

E fit by examining the importance of value congruence in predicting PS and LS. This

study is the first, to our knowledge, to investigate the relationship between value

congruence, PS, and LS in a Lebanese student sample. It also adds additional value in

that it includes three contexts of comparison: parents, fellow AUB students, and fellow Lebanese nationals. Specifically, we studied the effect of the magnitude and direction of value discrepancies between the individuals and their contexts of comparison on PS and LS.

There were clear differences in value profiles between the self-rated values and perceived value endorsement by participants' parents, AUB students, and Lebanese nationals. Of particular interest is the magnitude and direction of discrepancies between participants' value endorsements and those of the three contexts of comparison. Five large value discrepancies were found. Participants believed themselves to be more motivated by independent thought and action, and the pursuit of novel challenges, than their parents and Lebanese nationals (Openness to Change). They also perceived themselves to care more for the welfare of others than AUB students and Lebanese nationals (Self-Transcendence). Finally, participants considered themselves to place higher importance on honor and hospitality than other Lebanese nationals (emic Arab value).

It is important to note that average scores were above the midpoint for Openness to Change of parents and Lebanese nationals, Self-Transcendence of AUB students, and emic Arab value of Lebanese nationals. This indicates that despite the large discrepancies, participants still viewed their parents and Lebanese nationals to be motivated by Openness to Change, AUB students to be motivated by Self-Transcendence, and Lebanese nationals to be motivated by honor and hospitality. A possible explanation for the large discrepancies would be self-presentation biases. Participants could have responded in a way that they perceive as socially desirable, consequently enhancing their scores and increasing the discrepancy. The only average

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value score below the midpoint was the perceived Self-Transcendence of Lebanese nationals. This indicates that participants did not generally perceive Lebanese nationals to be motivated by Self-Transcendence values.

In line with our expectations, the more stress participants reported, the lower their life-satisfaction. Our findings also indicated that four value discrepancies were positively correlated with LS, specifically discrepancies on Self-Enhancement (for both AUB students and Lebanese nationals), Self-Transcendence, and the emic Arab value. First, as the magnitude of discrepancy increased between participants and both AUB students and Lebanese nationals, LS increased as well. Participants who reported being more motivated by Self-Enhancement than both AUB students and Lebanese nationals had higher LS. This suggests that participants in the current study viewed the two contexts, AUB and Lebanon, as environments that emphasize the need for manipulation to further one's self-interest. This finding is not surprising, since the general academic atmosphere in AUB can be regarded as competitive and necessitating drives for achievement. This is also true of Lebanon, where public services and jobs are not readily available nor equally distributed. These environments may therefore promote the need for self-enhancement.

The third significant value discrepancy was between self-rated Self-Transcendence, and perceived endorsement by AUB students. The more highly participants were motivated to act for the welfare of others, and the less they perceived their fellow AUB students to place importance on Self-Transcendence, the higher their LS. Finally, discrepancy scores between the self-rated emic Arab value and perceived endorsement by Lebanese nationals was also positively correlated with LS. Interestingly, the more participants perceived themselves to be high on honor and

hospitality, and the less they perceived Lebanese nationals to endorse these values, the higher their LS. This is in line with the large discrepancy between the participants and Lebanese nationals on the emic Arab value. One possible explanation is the enhancement of LS through downward social comparison. Participants would derive higher levels of LS when they perceive they are more motivated by the emic Arab values than other Lebanese nationals. This is especially relevant given the importance of honor and hospitality to the Lebanese in general (Harb, 2010).

Only one value discrepancy remained significant when the shared variances with self-rated values and other value discrepancies were accounted for. Value discrepancies between the self and AUB students on Self-Enhancement remained positively related to LS. This indicates that as the magnitude of the discrepancy increases, so does LS. The more individuals rated themselves as power and achievement driven, and the less they perceived AUB students to be motivated by Self-Enhancement, the higher their LS. We may therefore assume that the Self-Enhancement values of Power and Achievement were perceived to be relevant to the educational setting for our sample. This is not surprising given the established relationship between education and Achievement values in general (Schwartz, 2009). Sagiv and Schwartz (2000) found similar results for business university students: the higher they scored on Power and Achievement values, the higher their LS.

These findings reflect key relationships between value discrepancies and LS; however, they are not related to the magnitude of discrepancy. Value discrepancies that predicted LS were not the variables with the largest average value discrepancies. Despite the importance of these findings, the effect sizes of correlations, and the percent variance explained by the regression analyses, were small. The small effect sizes

replicate the findings of Dbaibo et al. (2010). This indicates that value congruence may not be a large predictor of LS or stress in a Lebanese sample. Alternatively, the mechanism through which value congruence affects LS or stress may be influenced by different mediators, or third variables, not accounted for in the present study.

In addition, the findings did not support the hypotheses that value discrepancies would be related to PS. This is surprising given the substantial relationship between PS and LS. Consequently, PS did not mediate the relationship between value discrepancies and LS. This was surprising given that value discrepancies in the workplace were predictive of occupational stress in a Lebanese sample (Dbaibo et al., 2010). This counterintuitive finding is very important because it indicates that value discrepancies (or misfit) are not inherently negative to one's well-being, but might actually be conducive to positive LS. In addition, despite the robust relationship between PS and LS, values and value discrepancies did not predict PS. This suggests that value endorsements may not be related to stress.

The inclusion of several contexts of comparison was valuable in that it allowed us to determine whether the relationship between values and value discrepancies were context specific. The results of this study suggest that it is not the magnitude of the discrepancy that is important, but rather the centrality of the value to the interaction between the individual and that specific context. This finding suggests that different values are vital in different contexts. Each significant value discrepancy came from a different value type and corresponded to a different context of comparison.

It is noteworthy that the context of highest importance to the relationship between LS and value congruence in our sample was that of AUB. It was the only context of comparison that remained an independent significant predictor. This suggests

that for our sample, university life and values serve an important context for the promotion of LS. This finding, however, could also be influenced by the context within which the study took place. The sample was an AUB student sample, the study was introduced in their course for which they received participation credit. These situational characteristics may have enhanced the salience and importance of the AUB context in this study.

The importance of the AUB context was especially surprising given that value congruence between participants and their parents was not a significant predictor of LS. Several limitations specific to the context of parents may have confounded the results. Parents represent a more personal relationship than AUB students or Lebanese nationals. For this reason, it may have been difficult to generalize perceptions of specific value endorsements to both parents. In addition, the value descriptions address both genders (s/he), which may have increased the difficulty of the survey. It is also possible that value congruence between participants and their parents are not important to LS or PS. Different family contexts, such as siblings, may be more important to the relationship between LS, PS, and value congruence.

The findings of this thesis need to be considered within the limitations of the research design. Specifically, the cross-sectional nature of our study limits the ability to infer causation. In addition, the sole reliance on self-report measures may be affected by response biases, such as social desirable responding and presentation bias. Also, the use of the cognitive element of SWB only confines our results to LS alone, and the findings can not be generalized to other components of SWB. Furthermore, the format of the scale used to measure values and value discrepancies was cognitively demanding, which may have contributed to error in the findings. Finally, the convenience sampling

restricts the ability to generalize results to the general population. This limitation is especially important given that the sample markedly differed from the general Lebanese population. The sample was of a higher socio-economic status, and consisted of a large majority of females, in comparison to the general Lebanese population. In addition, it was a university student sample, and findings may be limited to this age group. These limitations, however, do not invalidate the research findings. The use of psychometrically valid and reliable scales, in addition to the large sample size, give strength to the robustness of the associations found.

This thesis has various important implications to the study of value congruence, PS, and LS. Firstly, the current study suggests that value congruences are not large predictors of LS in a Lebanese sample. In addition, value congruence was not related to PS. The reasons for this, however, remain unexplored. Furthermore, the results suggest that the importance of value discrepancies in predicting LS depends on the centrality of the value type to the context, and the direction of the discrepancy. Value discrepancies are not inherently negative to well-being.

In light of the findings of this study, future research will need to focus on exploring the values that are important in specific contexts, and on that basis predict which value-discrepancies would contribute to LS. Furthermore, future research will need to explore the mechanisms through which value congruence affects LS. It is also essential to assess the importance of value congruence in contexts not explored in the present study. In addition, it is necessary to examine the relationship between value congruence, LS and PS in a representative sample. Finally, the findings of the study showed differences in value profiles between self-rated values and perceived endorsement by parents, AUB students, and Lebanese nationals. While these

differences warrant additional examination and attention, they were not the objective of

the current study. It would be interesting for future research to explore the reasons and

implications of these different value profiles.

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**CONSENT FORM FOR PERSONS PARTICIPATING
IN A RESEARCH PROJECT**

Value-Congruences, Perceived Stress, and Life-Satisfaction in an AUB Student
Sample

Dear participants, we would like to invite you to participate in a research conducted at
the American University of Beirut that seeks to explore perceptions of values in an
AUB student sample. In order to take part in this study, you have to be Lebanese and 18
years of age or above.

Before we begin, we would like to take a few minutes to explain why we are inviting
you to participate and what will be done with the information you provide. You will be
asked to read this consent form, and then respond to a questionnaire. Please read and
consider each question carefully, but do not agonize over your answers. There are no
right or wrong answers, and first impressions are usually fine. Just think about what best
reflects your own opinions or feelings.

We will be asking 300 participants registered in Psychology 201 at AUB to complete a
survey, and this collected information will be used in published research as well as in
academic presentations. Your individual privacy and confidentiality of the information
you provide will be maintained in all published and written data analysis resulting from
the study. There are no threats for the confidentiality of your results since no direct
identifiers will be recorded; no names nor signatures. Moreover, the data will be
reported in total.

The primary investigator and the co-investigator will be the only ones who have the
data. No confidentiality issues will possibly arise since the data is completely
anonymous. All data from this study will be maintained on a password protected
computer.

Participation should take less than thirty minutes. Please understand your participation
is entirely on a voluntary basis and you have the right to withdraw your consent or
discontinue participation at any time without justification or penalty. Some questions

may ask about your personal behaviors, however, you do not need to worry since it is an anonymous survey. There are no foreseeable risks for participating in this study, however, the results of the study will help researchers to better understand perceptions of values in an AUB student population. Furthermore, you will receive one extra point on your final PSYC 201 grade. Should you decide not to participate in this study, you can choose to write a brief report on an article from a psychological journal to receive credit equivalent to 1% point added to your final course grade (please refer to the IRB AUB Psychology 201 protocol). If at any time and for any reason, you would prefer not to answer any questions, please feel free to skip those questions. If at any time you would like to stop participating, you can simply terminate without justification. You will not be penalized for deciding to stop participation at any time.

If you have questions, concerns or complaints about this research study later, you may contact Dr. Charles Harb at 01/350000 ext 4371 or charles.harb@aub.edu.lb, or contact Lama Ghanem at llg00@aub.edu.lb.

If you are not satisfied with how this study is being conducted, or if you have any concerns, complaints, or general questions about research or your rights as a participant, please contact the AUB Social & Behavioral Sciences Institutional review Board (SBSIRB) at AUB: 01- 350 000 ext. 5445 or 5454 or irb@aub.edu.lb.

If you accept the above statements and you are willing to participate, please start answering the questionnaire. By continuing you indicate your consent to participate in the study and authorize the researchers to use your data.

THANK YOU FOR YOUR COOPERATION

<h3 style="text-align:center">Debriefing form</h3>

If you are interested in learning about the outcomes of the study (note that individual results cannot be provided) please contact Dr. Charles Harb (telephone: 01350000 Ext. 4371).
If you have any questions about your rights as a research participant, or to report a complaint, you may call:

IRB, AUB: 01-350000 Ext. 5543 or 5540

Appendix B

Survey

Section I: Values

Here we briefly describe some people. Please read each description and think about how much each person is or is not like you, is or is not like yourparents, is or is not like an AUB student, and is or is not like aLebanese national. In the four boxes to the right, insert a number from 1 to 5 indicating how much the person in the description is like you, your parents, an AUB student, and a Lebanese national.
For each question choose from the following alternatives:

Very Dis-similar	Dis-similar	Neither Similar nor Dis-similar	Similar	Very Similar
1	2	3	4	5

Example:

	You	Parents	AUB Student	Lebanese National
It is important for him/her to play football well. S/He wants to be a strong athlete.	5	2	3	1

	You	Parents	AUB Student	Lebanese National
1. Thinking up new ideas and being creative is important to him/her. S/He likes to do things in his/her own original way.				
2. It is important to him/her to be rich. S/He wants to have a lot of money and expensive things.				
3. S/He thinks it is important that every person in the world be treated equally. S/He believes everyone should have equal opportunities in life.				
4. It is important to him/her to show his/her abilities. S/He wants people to admire what s/he does.				
5. It is important to him/her to live in secure surroundings. S/He avoids anything that might endanger his/her safety.				
6. S/He likes surprises and is always looking for new things to do. S/He thinks it is important to do lots of different things in life.				
7. S/He believes that people should do what they're told. S/He thinks people should follow rules at all times, even when no-one is watching.				
8. It is important to him/her to listen to people who are different from him/her. Even when s/he disagrees with them, s/he still wants to understand them.				

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9. It is important to him/her to be humble and modest. S/He tries not to draw attention to him/herself.

10. Having a good time is important to him/her. S/He likes to "spoil" him/herself.

11. It is important to him/her to make his/her own decisions about what s/he does. S/He likes to be free and not depend on others.

12. It is very important to him/her to help the people around him. S/He wants to care for their well-being.

13. Being very successful is important to him/her. S/He hopes people will recognize his/her achievements.

14. It is important to him/her that the government insure his/her safety against threats. S/He wants the state to be strong so it can defend its citizens.

15. S/He looks for adventures and likes to take risks. S/He wants to have an exciting life.

16. It is important to him/her to always behave properly. S/He wants to avoid doing anything people would say is wrong.

17. It is important to him/her to get respect from others. S/He wants people to do what s/he says.

18. It is important to him/her to be loyal to his/her friends. S/He wants to devote him/herself to people close to him/her.

19. S/He strongly believes that people should care for nature. Looking after the environment is important to him/her.

20. Tradition is important to him/her. S/He tries to follow the customs handed down by his/her religion or his/her family.

21. S/He seeks every chance s/he can to have fun. It is important to him/her to do things that give him/her pleasure.

22. It is important to him/her to act in an honorable manner. S/He likes to maintain his/her dignity and earn respect from others.

23. It is important to him/her that s/he is hospitable. S/He likes to be generous even with strangers.

Section II: Perceived Stress

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. Although some of the questions are similar, there are differences between them and you should treat each one as a separate question. The best approach is to answer each question fairly quickly. That is, don't try to count up the number of times you felt a particular way, but rather indicate the alternative that seems like a reasonable estimate. For each question choose one of the five alternatives.

In the last month:	Never (N) 1	Almost Never (AN) 2	Some-times (S) 3	Fairly Often (FO) 4	Very Often (VO) 5
	N	AN	S	FO	VO
1. How often have you been upset because of something that happened unexpectedly?	1	2	3	4	5
2. How often have you felt that you were unable to control the important things in your life?	1	2	3	4	5
3. How often have you felt nervous and "stressed"?	1	2	3	4	5
4. How often have you dealt successfully with irritating life hassles?	1	2	3	4	5
5. How often have you felt that you were effectively coping with important changes that were occurring in your life?	1	2	3	4	5
6. How often have you felt confident about your ability to handle your personal problems?	1	2	3	4	5
7. How often have you felt that things were going your way?	1	2	3	4	5
8. How often have you found that you could not cope with all the things that you had to do?	1	2	3	4	5
9. How often have you been able to control irritations in your life?	1	2	3	4	5
10. How often have you felt that you were on top of things?	1	2	3	4	5
11. How often have you been angered because of things that happened that were outside of your control?	1	2	3	4	5
12. How often have you found yourself thinking about things that you have to accomplish?	1	2	3	4	5
13. How often have you been able to control the way you spend your time?	1	2	3	4	5
14. How often have you felt difficulties are piling up so high that you could not overcome them?	1	2	3	4	5

Section III: Life Satisfaction

Below are five statements that you may agree or disagree with. Using the 1 - 5 scale below, indicate your agreement with each item by choosing the appropriate number on the left. Please be open and honest in your responding.

	Strongly Disagree 1	Disagree 2	Neutral 3	Agree 4	Strongly Agree 5
	SD	D	N	A	SA
1. In most ways my life is close to my ideal.	1	2	3	4	5
2. The conditions of my life are excellent.	1	2	3	4	5
3. I am satisfied with my life.	1	2	3	4	5
4. So far I have gotten the important things I want in life.	1	2	3	4	5
5. If I could live my life over, I would change almost nothing.	1	2	3	4	5

Section IV: Identity

Below are four items that you may or may not agree with. Use the 5-point scale below to show the level of your agreement with each statement. Choose which number best describes your response and type it in the appropriate box. Please be open and honest in your responding.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
	1	2	3	4	5

	My Parents	AUB Students	Lebanon
1. I am concerned with the welfare of			
2. I derive pride from			
3. My foremost allegiance is to			
4. My identity is mostly defined by my belonging to			

Section V: Socio-demographic variables

1. Age _____

2. Major _____

3. Gender ☐ Female   ☐ Male

4. Nationality ☐ Lebanese ☐ Other (please specify) _____

5. What is your average monthly household income?

   ☐ Less than $500

   ☐ $500-$1000

   ☐ $1001-$1500

   ☐ $1501-$2000

   ☐ $2001-$3000

   ☐ $3001-$5000

   ☐ More than $5000

Appendix C

Principal Components Analysis and Reliability

Two principal component analyses (PCA) were conducted with Oblimin oblique rotation, followed by reliability analyses, to assess the factor structure of the 14 item PSS and the 5 item SWLS. Coefficients below the .30 mark were suppressed to result in a clearer factor loading structure.

Assumptions:

The assumptions of multicollinearity and singularity were met for both the PSS items and SWLS items, because the determinants obtained by the correlation matrices weregreater than .00001. The assumption of sphericity, tested with Bartlett's test, was also met, for the PSS items, $\chi^2(91)= 799.12$, p<.0001, and for the SWLS items, $\chi^2(10)= 319.48$, p<.0001. In addition, the Kaiser–Meyer–Olkin measure of sampling adequacy (KMO) was above .80 for both scales, an indication of a sampling adequacy (Tabachnik & Fidell, 2007).

Perceived Stress Scale:

A PCA, with a specified one-item solution, was run for the fourteen items of the PSS. The one factor solution explained 30.47% of the variance in the data. Reliability was assessed by checking chronbach's alpha, which had a very good reliability with a chronbach's alpha of .81.

Satisfaction with Life Scale:

A PCA, with a specified one-item solution, was run for the five items of the SWLS. This factor accounted for 56.01% of the variance. The scale had a high reliability with a chronbach's alpha of .79.

Appendix D

Socio-Demographic Variables

The sample consisted predominantly of females (63.9%), with male participants constituting just over a third of the sample (35.6%). The ages of the participants ranged from 17 to 22 (M=18.61, SD=.92), consistent with general age range of university students. The average monthly household income of participants ranged from less than $500 to over $5000 (see Table 8). It is noteworthy that 61.5% of the sample reported having a monthly household income above $2000, indicating that the majority of the sample came from a middle to high socio-economic class.

Table 8: Income

Monthly household income in US dollars	Percent
< 500	6.2
500-1000	13.3
1001-1500	9.7
1501-2000	9.2
2001-3000	12.8
3001-5000	17.9
>5000	30.8
Total	100

Appendix E

Normality

Table 9 - Normality

Variable	Z-Skewness
Self-Transcendence - Self	-7.83
Conservation - Self	-2.70
Self-Enhancement - Self	-3.33
Openness to Change - Self	-6.29
Arab - Self	-6.09
Perceived Stress	0.65
Life-Satisfaction	-1.61
Discrepancy - Openness to Change - SP	0.77
Discrepancy - Openness to Change - SA	0.11
Discrepancy - Openness to Change - SL	-1.95
Discrepancy - Self Enhancement - SP	3.08
Discrepancy - Self Enhancement - SA	2.56
Discrepancy - Self Enhancement - SL	3.69
Discrepancy - Conservation - SP	-3.46
Discrepancy - Conservation - SA	-0.49
Discrepancy - Conservation - SL	1.29
Discrepancy - Self Transcendence - SP	0.48
Discrepancy - Self Transcendence - SA	0.80
Discrepancy – Self Transcendence - SL	-1.03
Discrepancy - Arab - SP	-0.91
Discrepancy - Arab - SA	1.90
Discrepancy - Arab - SL	0.21

Appendix F

Predictors of Life Satisfaction

The 5 self-rated values (Arab, Self-Enhancement, Openness to Change, Self-Transcendence, and Conservation) were entered into the first block of the multiple regression using forward entry. The 15 discrepancy scores on all three dimensions (SP, SA, SL) were entered into the second block also using the forward method. LS was entered as the dependent variable. The regression model, with the four predictors, accounted for a total of 15% of the variance explained. Adjusted R^2=.13, indicated a shrinkage of 2% when moving from the sample to the population.

The standardized Beta coefficients of the regression model indicate that Self-Transcendence – Self, ß=.28, t(202)=3.78, p<.01, was the largest predictor followed by Discrepancy – Self Transcendence – SP, ß=-.25, t(202)=-3.47, p<.01, then Discrepancy – Self Enhancement – SA, ß=.24, t(202)=3.59, p<.01, and lastly Discrepancy – Arab – SL, ß=.15, t(202)=2.13, p<.05. Only Discrepancy – Self Transcendence – SP had a negative relationship with LS, indicating that as perceived parental endorsement of Self-Transcendence increased, or self-rated Self-Transcendence decreased, life-satisfaction increased. The positive relationship between Discrepancy – Self Enhancement – SA and Discrepancy – Arab – SL with LS indicated that as self rated scores increased, and perceived endorsement by AUB students and Lebanese respectively decreased, LS increased. In addition, the higher an individual rated themselves on Self-Transcendence, the higher their LS. These results only partially support the hypotheses. Examining the means and standard deviations of the value discrepancies indicates that the three significant value discrepancies did not correspond to larger magnitudes of discrepancies.

Table 10: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
					Change Statistics				
1	.39[d]	.15	.13	.69	.02	4.55	1.00	200.00	.03

Table 11: Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
	(Constant)	1.85	.37		4.94	.00
	Self Transcendence - Self	.35	.09	.28	3.78	.00
1	Discrepancy - Self Enhancement - SA	.27	.08	.24	3.59	.00
	Discrepancy - Self Transcendence - SP	-.35	.10	-.25	-3.47	.00
	Discrepancy - Arab - SL	.11	.05	.15	2.13	.03