The Clinical Implications of Social Interest on Mental Health in Lebanon

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To Nounous:

My one and only true friend.

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Abstract

The relationship between Social Interest and Mental Health was assessed among a student sample from the Lebanese population, in Lebanon. A total of 193 individuals (convenience sample) were administered the J.E. Crandall's Social Interest Scale (SIS), and Veit and Ware's Mental Health Inventory (MHI-38), along with an in-depth demographic survey. Social Interest was not correlated with Mental Health, any of its five subscales (Anxiety, Depression, Loss of Behavioral/Emotional Control, General Positive Affect, Emotional Ties), or its two global scales (Psychological Distress, Psychological Well-Being) in the total population, or in specific populations when each demographic strata was checked individually, hence nonconforming to all prior research on the effects of Social interest on Mental health, to produce new findings in this area of study. Implications of the findings, as well as suggestions for future research were provided.

Keywords: Adler, Crandall, Social Interest, Mental Health, MHI-38, Social Interest Scale, Depression, Personal Differences, Correlation, Lebanon

Clinical Implications of Social Interest on Mental Health in Lebanon

Chapter I: INTRODUCTION

Social interest is a term coined by Alfred Adler, who in 1956 defined it as the drive to cooperate and work with other people for the common good. The theory of Social Interest infers that the higher a person's level of social interest is, the better their mental health will be (Adler, 1956; Adler, 1970; Etzioni, 1993; Schwartz, Meisenhelder, Ma, & Reed, 2003). The level of a person's mental health is indicated by his/her emotional, psychological, and social well-being. A person is said to be mentally healthy in the absence of any diagnosable mental disorders, or mental health conditions that affect thinking, mood or behavior to the point of causing distress of impairing normal functioning and enjoyment of life (World Health Organization, 2001; Satcher, 2000), and according to many studies, one of the most common form of mental health disorders is Depression (Üstün, Ayuso-Mateos, Chatterji, Mathers, & Murray, 2004; Chapman, Perry, & Strine, 2005; Kessler, Chiu, Demler, & Walters, 2005; Murray, & Lopez, 1996). At the same time, in addition to anxiety related issues, and difficulties in social adjustment, Depression is the most common consequence to having low levels of Social Interest (Schwartz, Meisenhelder, Ma, & Reed, 2003; Thoits, 2011; Park, 2004).

Depression affects a lot of people, the 12 month prevalence rates in the United States is estimated at 7% a per the Diagnostic and Statistical Manual of Mental Disorders, 5th Edition: DSM-5 (American Psychiatric Association, 2013) and its treatment is not always as smooth or successful as one would like it to be (Cooper, Gonzales, Gallo, Rost, Meredith, Rubenstein, & Ford, 2003). Many treatment methods, techniques and practices in the treatment of depression involve in part, treating the symptoms of depression, i.e.: encouraging the client to be more active,

surround himself/herself with family and friends for support (Stice, Ragan, & Randall, 2004), in other words, helping him/her become more sociable, or suggesting to the client to be become active with acts in social interest.

Given the worldwide incidence rates of depression, extensive research is conducted on exploring the causes and treatment methods as well as various factors that correlate with depression, such as, life satisfaction, and social interest (Crandall, 1980; Lantz, 1981; Adler 1964; Highlander, 1984; Miranda & Umhoefer, 1998; Ionedes, 2008; Saunders & Roy, 1999). This dissertation explores the relationships between Social Interest and Mental Health and attempts to display their projected implications on one another.

The foreseeable anticipated outcome of this study is the emergence of the need for a new trend in the prevention and treatment of depression and other mental health problems in Lebanon; one that accounts for the effect that Social Interest has on Mental Health.

Background of the Problem

The results of the 2013 study conducted by the researcher looking into the relationships between Depression, Life Satisfaction and Social Interest in the Lebanese population revealed that there is a significant negative correlation between depression and life satisfaction, a significant positive correlation between life satisfaction and social interest, but no significant correlation between social interest and depression. Upon more in-depth analysis of the data, the study exposed some demographic differences whereby in the female population, significant inter-correlations between all three of the studied variables were observed (depression, life satisfaction and social interest); conforming to results obtained from studies

conducted in Western, individualistic societies, where depression correlates negatively with social interest and life satisfaction, and social interest correlates positively with life satisfaction; while the male population in the Lebanese study, showed a significant negative correlation between Depression and Life Satisfaction, but exposed no significant correlation between depression and social interest or life satisfaction and social interest. These results came as a total contradiction of all previous studies conducted on the topic of Social Interest.

It is also to be noted that to the researcher's knowledge, prior to the above-mentioned study, no similar research has ever been conducted on Social Interest in Lebanon or in the Arab World.

The results of the aforementioned study suggested the plausible need for new preventive and treatment methods for depression for Lebanese males, and/or a change in the educational and social organizations of Lebanon, to compensate and nurture Social Interest in Lebanese males, to shield them from Depression and other Mental Health related issues –as a preventive measure, and provide them with the necessary structure to overcome Depression, or other Mental Health related issues.

Statement of the Problem

The pioneering 2013 study, did not go as far as to generalize its outcomes due to the homogeneity of the sample it represented. While its predecessor chiefly considered the relationships between Depression and Social Interest, the current study goes much more in-depth, to study many other constructs that make up a person's overall Mental Health, not limiting itself to just depression and life satisfaction, but in addition to those, assessing the participants' levels of anxiety, loss of emotional and behavioral control, general positive affect, and emotional ties; all of which when combined, indicate the level of a person's overall Mental Health (1993, 1992, & &

Davies, 2012; Cuijpers, Smits, Donker, ten Have, & de Graaf, 2009; National Mental Health Working Group, 2003; Rumpf, Meyer, Hapke, & John, 2001; Thorsen, Rugulies, Hjarsbech, & Bjorner, 2013; Veit & Ware, 2003; Yamazaki, Fukuhara, & Green, 2005).

Purpose of the Study

This study had for aim the solidification of the prior research conducted by the author that is relative to the topic at hand.

The attempt of generalization of the findings, or the individualization/localization of findings to specific groups within the Lebanese population.

Most importantly, the present study hopes to shed a new light on the topic of Social Interest and its possible role in the prevention and treatment of mental health problems in Lebanon.

Conceptual Framework

The concept of Social Interest claims that in order for a person to be Satisfied With Life, (s)he has to have good Mental Health (Hall, 2014), where Life Satisfaction is said to be correlated with high levels of Social Interest, since it in turn leads to the development of better social support systems, that serve as a safeguard against psychological disorders (namely depression and anxiety disorders), or help individuals in dealing with them in a healthy and constructive way, whenever they present themselves (Adler, 1956; Aslinia, Rasheed, & Simpson, 2011; Etzioni, 1993 ; Leak, Millard, Perry, & Williams, 1985).

It is with this understanding that the current study considers Depression, Anxiety, Loss of Behavioral & Emotional Control, General Positive Affect,

Emotional Ties and Life Satisfaction as the key variables, to assess the relationship between Social Interest and Mental Health.

Definition of Terms

Social Interest

An individual may, or may not have high levels of social interest. The criteria of measuring Social Interest in people are based on a set of values a person may or may not possess or wish to have. According to Crandall (1975), the developer of the Social Interest Scale that is also used in this study for the measurement of Social Interest, these values are: helpfulness, sympathy, considerateness, respectfulness, generosity, tolerance, trustworthiness, forgiveness, cooperativeness, morality, and patience. An individual might have or wish to have all of these values, or none of them, or may value other personal characteristics or values above these, rendering the lower on the Social Interest continuum. The possible range of scores on the Social Interest Scale is between zero, indicating no Social Interest, and 15, indicating a maximum level of Social Interest.

Mental Health

The mental health of a person is measured by assessing said person's levels of depression, life satisfaction, anxiety, loss of emotional and behavioral control, positive affect, and emotional ties (Veit & Ware, 1983). In the end, a person may be said to have poor mental health or good mental health depending on his scores on Veit & Ware's Mental Health Inventory (1983). It is this very scale that the current study uses for the measurement of its participants' levels of Mental Health. The lowest possible score a person can get on the Mental Health Index is 38 and the highest is 226.

Depression: In this study, depression is assessed as one of the subscales in the Mental Health Inventory (Veit & Ware, 1983), and a person is said to be depressed or not based on his scores on the depression subscale, where scores may range between 4 and 23. Depression is assessed by assessing a person's level of depressed mood during the past month, negative affect, frequency of moodiness and brooding, and frequency of experiencing negative affect.

Chapter II: REVIEW OF THE LITERATURE

Many factors influence a person's mental health, and the presence of depression is the most common element in people with poor mental health (Üstün, Ayuso-Mateos, Chatterji, Mathers, & Murray, 2004; Chapman, Perry, & Strine, 2005; Kessler, Chiu, Demler, & Walters, 2005; Murray, & Lopez, 1996). According to Baron (1998), 12% of men and 21% of women will have depression during their lifetime, and of the male population, 3% will have at least one episode of severe depression, while this figure is at 6% in the female population. According to Meyer & Deitsch (1996) have found that women who have economic problems, low self-esteem, high levels of helplessness, and a negative view of the world, are more susceptible to depression.

Factors influencing depression include but are not limited to genetic factors associated with depression, faulty cognitive processes, biological and hormonal interactions, and social and cultural influences. Meyer & Deitsch (1996) further elaborate and state that people who have had a major depressive disorder during their childhoods, a recent trauma, a loss, or generally elevated levels of stress, alcoholism, and long-lasting physical sickness are even more prone than others to be suffering from Depression.

Depression negatively affects a person's satisfaction with life, and can have long-lasting effects on the person's Mental Health (Beck & Alford, 2009). Having high levels of Social Interest can act as a shielding factor by increasing a person's social support, to prevent depression, and other mental health problems (Alfred Adler, 1938; Aslinia et al., 2011; Bash, 2015; Crandall, 1981; Miranda & Umhoefer, 1998; Ansbacher, 1999).

A 2006 study in Northeastern USA examining the relationship between self-esteem, depression, and life-satisfaction found that high self-esteem and higher levels of life-

satisfaction significantly correlated with lower levels of depression (Milevsky, Schlechter, Netter & Keehn, 2006).

Social Interest

Alfred Adler (1870–1937) was an Austrian psychologist, a theorist in the field of personality, and an advocate of community. His goal was to empower his readers and followers with the advancements made in the field of psychology, education and philosophy (King and Shelly, 2008). Adler's work included some features of cognitive psychology (Oberst & Stewart, 2003), but due to the overly-simplistic English translation of his work, Adler's theories were often overlooked including his writings on Social Interest (Lehrer, 1999).

Social Interest is used to designate "Gemeinschaftsgefühl", a German term coined by Alfred Adler himself, who in 1956 defined Social Interest as the drive to cooperate and work with other people for the common good. According to Adler and many others (Crandall, 1981; Gilman, 2001; Greever, K. B., Tseng, M. S., & Friedland, 1973; Jeong, Lee, & No, 2006; Johnson & Smith, 2011; Kaplan, 1991; G. K. Leak, 2011; Miranda & Umhoefer, 1998; Mozdzierz & Semyck, 1980; Schwartz, 2003), Social Interest is a major factor that affects the person's Mental Health in such a way that the higher a person's Social Interest is, the higher his/her level of Life Satisfaction will be. Unlike the concept of altruism, which involves selflessly doing something for the good of someone else –often associated with the notion of self-sacrifice for the good of others (Fehr & Fischbacher, 2003), an act done in Social Interest does not require selflessness or any sort of sacrifice. Moreover, thoughts, emotions and behaviors associated with Social Interest are self-serving as well as in service to the community, as Social Interest is said to be a socially desirable and

socially reinforced norm, in some societies, namely collectivistic ones, more so than others (Hui, 1988; Singelis, Trafimow, Realo, Triandis, & Street, 1998).

Ansbacher (1999), one of the main translators of Aflred Adler's works, suggests that it was Adler's conviction that, the majority of the people who have low levels of Social Interest, are plagued by feelings of inferiority, which often leads to the development to inferiority complexes or to compensate, superiority complexes. His solution for this was Community Therapy, which ultimately aims to promote Social Interest in people. He argued that people with high levels of Social Interest were healthy people, who were apt to promote Community Feeling or Social Interest in others as well.

In short, according to Adler (1956), Social Interest is the major factor that affects a person's Mental Health in such a way that the higher the person's Social Interest is, the better that person's Mental Health will be.

Adlerian psychologists have emphasized the relatedness of Adlerian concepts to the principles of Positive Psychology (Carlson, Watts, & Maniacci, 2006; Leak & Leak, 2006), specifically highlighting the relationship between pro-socialness and social interest. For an instance, a 2006 study by Leak and Leak pointed to a positive correlation between social interest and healthy psychological functioning.

Brewer and Carroll (2010), found that women in general, have higher levels of Social Interest than males ($M = 7.67$; $SD = 3.29$ for males, versus $M = 9.73$; $SD = 2.47$ for females) concluding that females would be more successful than males in coping with life tasks, which he said implies that the females (in his sample) should have a greater degree of mental health than their male counterparts, referencing Alfred Adler's theory of Social Interest (A. Adler, 1956).

A 1974 study conducted by Lewinsohn suggests that it is because of depression, that people have fewer interactions with others, and as a result, miss prospects for receiving positive reinforcement; a notion affirming Adler's concept of social interest

Characteristics of Collectivist Cultures

One of the characteristics of collectivist societies, the most relevant to this investigation, is the interdependence of individuals within their inner circles, and their allocation of priorities to the aspirations, objectives and goals of their inner circles. It shapes their behavior mostly on the basis of these circles' norms, and leads them to a more communal behavioral path (Mills & Clark, 1982).

Relationships in collectivist cultures are of great importance. For example, in situations of conflict, collectivists are chiefly concerned with maintaining their relationship status with others, while individualist societies' primary goal is the establishment of justice (Ohbuchi, Fukushima, and Tedeschi, 1999). Leung, (1997) reports that collectivists are more biased toward resolving conflicts in methods that would maintain their relationships and not destroy them, while individualists will readily resort to lawyers and law suits in the settlement of their disputes.

Collectivists often internalize the norms of the groups they belong to and take pleasure in fulfilling the expectations these groups have of them (Bontempo, Lobel, & Triandis, 1990). They receive marginally higher levels of social support, and are not as likely as individualists to experience feelings of loneliness or isolation (Triandis, Bontempo, Villareal, Asai, & Lucca, 1988).

Miller (1997) reports that, in a collectivist society, helping a member of one's group is regarded a duty, whereas in an individualist society, it is considered a matter of choice or an option rather than a duty. Even liking a person or not does not affect the collectivist person's choice of helping a member of his/her group or society (Miller & Bersoff, 1998). In collectivist societies, morality is contextual, because the welfare of the collective is seen as the supreme value. For example, lying, in

collectivist societies, is an acceptable behavior, but only if it is done to "save face", or if it helps the group the person belongs to (Trilling, 1972).

In another study conducted by McAuliffe, Jetten, Hornsey and Hogg (2002), it was found that in Indonesia collectivist behavior that benefitted the group would be evaluated more positively and was considered the normative behavior, compared to individualistic behavior within the same group.

Mental Health

One of the points addressed in this study is the choice of mental health variables. While there is only one definition for Social Interest, researchers have defined mental health in a number of ways. Some studies have fixated on the negative actions of psychological adjustment such as stress, anxiety, depression, guilt, adverse mood (Kessler, Andrews, Mroczek, Ustun, & Wittchen, 1998), others defined it as a function of happiness or life satisfaction and the absence of mental disorders (Bergan & McConatha, 2001; Bargin, 1983; Myers, & Diener, 1995).

The present study combines both perspectives, and views mental health as a person's emotional, psychological, and social well-being, where a positive assessment of mental health is made in the absence of any mental health conditions like depression, anxiety, negative affect or behavior al conditions, and a good level of life satisfaction, and a negative assessment is made when the aforementioned criteria are present intensely enough to cause distress and/or impairing normal functioning and enjoyment of life (World Health Organization, 2001; Satcher, 2000 ; Veit & Ware, 2003).

Depression, one of the main correlating factors with poor mental health (Üstün, Ayuso-Mateos, Chatterji, Mathers, & Murray, 2004; Chapman, Perry, & Strine, 2005; Kessler, Chiu, Demler, & Walters, 2005; Murray, & Lopez, 1996,

Schwartz, Meisenhelder, Ma, & Reed, 2003; Thoits, 2011; Park, 2004) is one of the central factors of this study, along with Anxiety and Life Satisfaction, the other highest correlating factor with Mental Health (Headey, Kelley, & Wearing, 1993; Keyes, 2002; Zuzanek, 1998; Bray & Gunnell, 2006; Hu et al., 2014).

Depression

According to the Psychodynamic theory, depression is centered on the concept of loss –the loss of a person, or a meaningful object. Said loss does not have to be in the literal sense, but it can also be a fictive loss, in its sufferer's imagination. When the feeling of loss does not come as the result of losing a loved one, said loss is dubbed symbolic loss (Lowry, 1984).

The school of Behavioral Psychology proposes that depression is a learned phenomenon; the manifestation of a lack in positive reinforcement for its sufferer's actions (Wetzel, 1984). In turn, depression causes –in many cases, a lack in motivation and self-control, which yield negative feedback from a person's surroundings.

It is a vicious circle: the absence or deficiency in positive reinforcement results in depression, leading to a lack of motivation, producing an absence or deficiency in positive reinforcements in a person's life. Seligman (1975) and Wetzel (1984) advance the theory of depression as learned helplessness, which compliments one of the aspects in the psychoanalytic view of depression. This view of depression suggests that some children at a young age learned to be passive because they felt too secure as their overprotective parents tried to shield them from every possible negative influence, and once they are out in the practical world as grown-ups, the stress becomes too intense for them to handle, which results in feelings of inferiority,

because they are now left with the idea that they are powerless; unable to take care of themselves, ergo depression by learned helplessness.

In the Cognitive Behavioral school of thought, depression is seen as the result faulty cognitions that distorted reality. Papalia and Olds (1988) report that Beck's model of depression suggests that people with depression have negative feelings and ideas about the world and everything in it, and have a negative outlook on the foreseeable future. These negative feelings and thoughts give way to inferiority feelings, which in turn grow into feelings of worthlessness (Schwartz & Schwartz, 1993).

In the nature versus nurture debate, nature, or the Biological interpretation of depression suggests that depression is hereditary. When it comes to Major Depression, the scientific data is not as conclusive about the matter as is research conducted on people with Bipolar Depression, where twin studies have an 80% chance that both twins will have Bipolar Depression, but only if the first one has it too (Schwartz & Schwartz, 1993).

According to the American Psychiatric Association, the most common signs of depression are persistent depressed mood, persistently reduced or complete lack of interest or pleasure in activities, sudden weight gain or weight loss, persistent insomnia or hypersomnia, persistent psychomotor retardation or agitation, persistent feelings of worthlessness or undue feelings of guilt, persistent lack of concentration, persistent indecision and recurrent thoughts of suicide and death (American Psychiatric Association, 2013).

Life Satisfaction

Life Satisfaction is the degree to which a person positively evaluates the overall quality of his/her life as-a-whole, or, how much the person is satisfied with the life (s)he leads (Veenhoven, Scherpenzeel & Bunting, 1996).

According to Veenhoven (1996), satisfaction with life denotes the presence of conditions deemed necessary for a good life, and the actual practice of living a good life.

When societies are concerned, it is the first part of this definition that is under consideration.

Where individuals are concerned, life satisfaction includes both parts of Veenhoven's definition, whereby a person may not lack some or all of the necessary circumstances for a satisfying life, and still be troubled, and not be satisfied with his or her life. Conversely, a poor, powerless and isolated person, living in unsecure, unstable conditions, may still be thriving both mentally and physically, and that is why Veenhoven puts forth the idea of Presumed Satisfaction with Life and Apparent Satisfaction with Life.

Tatarkiewicz, (1966) says that Life Satisfaction is satisfaction with one's life as a whole. This implies that if a person is said to be Satisfied with Life, then this person should be satisfied with his/her current segment of life, past segment of life and also the future segment of his/her life.

Etzioni (1993) submits that Life Satisfaction is the paramount indicator of a person's physical, mental, and social well-being; Headey, Kelley, and Wearing (1993) who looked at the interplay between life satisfaction, positive affect, anxiety, and depression, found a significant correlation between life satisfaction and depression,

and went on to conclude that a person may be satisfied with life and be anxious, but cannot be depressed and satisfied with life at the same time.

Finally, Salmans (1997) affirms that it is impossible to ameliorate a person's Life Satisfaction without working on the factors that contribute to its make-up, and of the highest correlating elements with Life Satisfaction is Depression (Salmans, 1997).

Previous Studies

Despite the importance of the Adlerian Social Interest, relatively little empirical investigation has been conducted on the topic (see Appendix C). Furthermore, there are very few published studies that target Social Interest and Depression, and even less about Social Interest and Life Satisfaction, leading to a severe scarcity of resources in the literature related to Social Interest. Saunders & Roy (1999) authored the only other study besides the current one, involving depression, social interest and life satisfaction.

A number of previous studies have established a clear link between factors affecting Mental Health, Life Satisfaction, and Social interest (Crandall, 1980; Schwartz, Meisenhelder, Yunsheng & Reed, 2003; Craighead, Curry & Ilardi, 1995; Gilman, 2001; Highlander, 1984; Miranda & Umhoefer, 1998; Lantz, 1981), demonstrating a significant correlation between all three of the aforementioned variables. For example, Saunders & Roy (1999) observed a significant negative correlation between Social Interest and Depression with $r = -0.405$ ($p < .001$), a significant negative correlation between Depression and Life Satisfaction with $r = -0.506$ ($p < .001$), and a significant positive correlation between Life Satisfaction and Social Interest with $r = 0.462$ ($p < .001$). These studies, however, did not find any significant differences in their results when demographic factors such as sex, age, or

level of education were put under focus. In other words, no significant relationship was found between the demographic variables, and Social Interest, Life Satisfaction or Depression.

Moreover, when studying the relationships between Mental Health and Social Interest, the results showed that people with higher levels of Social Interest have a better level of Mental Health than those with lower levels of Social Interest (Schwartz, Meisenhelder, Yunsheng & Reed, 2003), thus providing further validation regarding the relationship between Social Interest and Depression. Some studies went even further to look into factors that could affect the relationship between social interest and depression scores.

Gilman (2001) reported significant differences in scores between some populations on the social interest scale, depending on race and ethnic background. Specifically, scores of participants who come from a collectivistic society showed higher social interest scores than those from a predominantly individualistic society. However, the differences in scores of the ethnic minorities did not change the direction of the study's overall results as the samples of these particular groups were quite small.

What then, the researcher wondered, would be the results of such a study where the population being researched, in this case the Lebanese population, is predominantly collectivist?

The previously mentioned 2013 study (Kavlakian, 2014) exploring the relationships between Depression, Life Satisfaction and Social Interest in Lebanon, found a negative correlation between Depression and Life Satisfaction with $r = -.539$ ($p = 0.01$), a positive correlation between Life Satisfaction and Social Interest with $r = .164$

($p = 0.01$), but contrary to all previous studies, no correlation was seen between Social Interest and Depression.

Upon further investigation whereby the analysis was expanded by dividing the sample into two groups –males and females, and analyzing the data accordingly, the results showed that in both Female and Male populations, Depression and Life Satisfaction were still showing a negative correlation with $r = -.548$ and $r = -.534$ respectively, but now when taken separately, the Female group showed a negative correlation between Depression and Social Interest ($r = -.199$) where there was none in the total sample, while the Male group still showed no significant correlation between Depression and Social Interest. In addition, the Female population showed a positive correlation between Life Satisfaction and Social Interest ($r = .273$), while the Male group showed no significant correlation between Life Satisfaction and Social Interest!

To the researcher's knowledge, these findings were unprecedented in any study conducted on Social Interest, and had the potential to call for the emergence of new trends to improve the effectiveness of psychotherapy (namely in the treatment of depression), to better reach the goals set by social and cultural groups where, social awareness, conflict resolution, and interpersonal and intrapersonal skills are being thought. It is for these reasons, that the present study suggests a more detailed correlational and exploratory effort, to try and understand Social Interest better, along with how its varying levels in individuals and possibly groups, interacts with said individuals or groups' mental health. The current study uses a multidimensional demographic scale in addition to the clinical scales measuring Social Interest and Mental Health. The results of this study also factor in the different components of mental health under two main factors, which indicate participants' levels of Psychological Distress and on the other end of the spectrum, their Psychological

Well-being, and it takes into consideration the role that preferred language can play on a participant's level and scores of Social Interest, based on the research conducted by Ayyash-Abdo, & Alamuddin (2007), where participants whose preferred language was Arabic scored higher on the Collectivism scale when compared to their English-preferring counterparts, which in theory is reflected on the participants' levels of Social Interest, as per the findings of Hui (1988), who found that participants who scored higher on the collectivism scale exhibited more favorable attitudes toward sharing other peoples' burdens and troubles, which fall in line with the Adlerian notion of Social Interest (Alfred Adler, 1938; J. Crandall, 1975; Kaplan, 1991)

Chapter III: METHOD

As previously stated, the current research is a quantitative research, and is by nature both correlational and exploratory. To this end, different scales were used, and stacked in a specific order. In order to understand the relationship between mental health and social interest, two different scales were used, and in an effort to localize or generalize the findings, a demographic questionnaire was added to the questionnaire booklet (see Appendix C). In an effort to minimize social desirability bias and to maximize more candid responses to both the Social Interest scale and the Mental Health scale, the aforementioned demographic questionnaire was intentionally placed as the 4th and last item in the questionnaire booklet, following the consent form which required no signatures, the scale measuring social interest and the scale measuring mental health.

Research Questions & Hypotheses

In light of the review of the literature, the following research questions were asked:

- How will the Depression scores correlate with the scores on the Social Interest scale in the total population and in the Male and Female populations?
- How will Life Satisfaction correlate with the scores on the Social Interest scale in the Male and Female populations?
- Will respondents with English as their preferred language exhibit a lower score on the Social Interest scale than people who prefer Arabic? Will there be any gender differences in this distinction?
- Will Mental Health correlate positively with Social Interest?

- How will the subscales of the Mental Health Index correlate with Social Interest?
- What other trends will emerge from the demographic differences in relation with Social Interest and Mental Health?

Based on the above-mentioned research questions, the following hypotheses were generated:

- Social Interest will be correlated with Depression.
- Males' Social Interest will not be correlated with Depression.
- Females' Social Interest will not be correlated with Depression
- Both Males' and Females' Life Satisfaction will be correlated with Depression.
- Females' Mental Health will be correlated with Social Interest
- Males' Mental Health will not be correlated with Social Interest
- Participants whose preferred language is English will score lower on Social Interest than participants whose preferred language is Arabic.

Research Design

This quantitative study is both correlational and exploratory in design, aiming at the identification of trends between the studied variables in relationship to socio-demographic differences.

Population

This study had 193 participants, of which 131 female (68%) and 62 male (32%), all university students in Lebanon. 85% of the participants were enrolled in an undergraduate degree, and 15% in a graduate level degree. 88.6% of the population had graduated from a private formal school system, and 11.4% from a public school.

46.9% designate English as their preferred language, 40.6% indicated Arabic as their preferred language, and the remaining 12.5% designated other different languages as their preferred language. 4.7% of the study participants had no siblings, 22.9% had one sibling, and 72% had 3 or more siblings. 9.9% indicated that they do not subscribe to any particular religion, 10.9% indicated that they are Christians, 63% indicated that they are Muslim, 16.1% indicated that they are from other religions, or opted not to answer that question in the survey. 80.7% of the population has lived the majority of their lives in Lebanon, and the remaining 19.3% have lived outside of it. 47.5% are from Beirut, 8.7% from Mount Lebanon, 32.8% from the South, 3.3% from the North, and 7.7% from the Bekaa region.

Instruments

Social Interest Scale

J. E. Crandall's (1991) Social Interest Scale (SIS): The purpose of this questionnaire is to gather data on the participants' level of Social Interest. The questionnaire is comprised of 24 questions, each representing a pair of traits. Participants were asked to choose one trait from each pair, based on which of those two traits they would rather possess (Appendix B).

The SIS's scores can range between zero and 15. The average score is 8.43 with a standard deviation of 3.57 (Crandall, 1991).

Mental Health Inventory

Veit and Ware's (1983) Mental Health Inventory (MHI-38): The purpose of this 38 item self-rated scale is to assess a person's Mental Health (Appendix B).

All of the 38 MHI items, except two, are scored on a six-point Likert-style scale (range 1-6). Items 9 and 28 are the exceptions, and are scored on a five-point scale (range 1-5).

The items which describe symptoms or states of mind are rated in terms of frequency or intensity over the past month.

The MHI may be aggregated into:

Six subscales, two global scales, and a global Mental Health Index score.

Subscales and raw score ranges are as follows:

1. MHA: Anxiety (9 to 54 with higher scores indicating greater anxiety)
2. MHD: Depression (4 to 23 with higher scores indicating greater depression)
3. MHC: Loss of Behavioral/Emotional Control (9 to 53 with higher scores indicating greater levels of less of behavioral/emotional control)
4. MHP: General Positive Affect (10 to 60 with higher scores indicating greater positive affect)
5. MHE: Emotional Ties (2 to 12 with higher scores indicating stronger emotional ties)
6. MHL: Life Satisfaction (1 to 6 with higher scores indicating greater life satisfaction)

The two global scales and their raw score ranges are:

1. MHPD: Psychological Distress (24 to 142 with higher scores indicating greater psychological distress)
2. MHPW: Psychological Well-being (14 to 84 with higher scores indicating greater psychological well-being)

The inventory also yields a Mental Health Index (MHI), the scores of which can range between 38 and 226 (Ritvo et al., 1997).

Reliability and Validity

Social Interest is measured using Crandall's (1981) Social Interest Scale (SIS), where the test-retest reliability of the SIS was .82 over 5 weeks and .65 after 14

months. Internal consistency measures included coefficient alpha, assessed by Kuder-Richardson, K-R 20, .73 (N = 246), and K-R 21, .71 (TV = 1,784). SIS's construct validity is supported by its positively relating to concepts of empathy, altruism and cooperation, while it is negatively related to self-centeredness and criminal behavior (Crandall 1981).

Mental Health is measured using Veit & Ware's (1983) Mental Health Inventory (MHI-38). The MHI has a Cronbach alpha of .93, and the concurrent validity as well as discriminate validity of the MHI is deemed to be at satisfactory levels (Cassileth et al., 1984; Rosenthal, et al., 1991; Veit & Ware, 1983; Ware, Davies-Avery, & Brook, 1980; Ware, Manning, Duan, Wells, & Newhouse, 1984). It is to be noted that the short-form of the MHI-38 dubbed MHI-5 has previously been used in Lebanon by Makhoul et al. (2011) and was deemed suitable, applicable and appropriate to be used in Lebanon. No further qualitative data was presented in Makhoul et al.'s study on the reliability or validity of the MHI-5.

Procedure

An exemption from the Cyprus Bioethics Committee was obtained due to the fact that the research was, by design, being conducted outside of Cyprus. A letter of intent was obtained from the Head of the Department of Social Sciences at the University of Nicosia, and sent to the Institutional Review Board (IRB) of Lebanese American University and to the Haigazian University, two of the three most well-established universities in Lebanon. In addition, a completed IRB protocol in the case of the Lebanese American University, which had to be reviewed, approved, and signed by one of the university's faculty members was also a part of this study. Upon receiving IRB approval, the questionnaire packets were printed, and over the course

of four weeks, the researcher approached students on university campus grounds, and asked them to participate in a survey studying the relationship between Social Interest and Mental Health, They were informed that the survey was to be part of the researcher's doctoral dissertation in Clinical Psychology at the University of Nicosia. The questionnaire packet was comprised of 12 pages, the first page of which was the consent form which students were not required to sign by the consent form's design; next came the Social Interest Scale, followed by the Mental Health Inventory (MHI-38), and the demographic questionnaire was last.

The collection of data was done in person, and the same instructions were given to all the persons participating in the surveys.

Data Analysis

The analysis of data was performed using the statistical analysis program: IBM SPSS Statistics version 23, and a myriad of descriptive and correlational matrixes were generated using said data.

Based on expert advice about the nature of the multitude of studied variables, no regression analysis was conducted on the data, due to the interconnected nature of most of the study's variables.

Chapter IV: RESULTS

This chapter shows the results of the data analysis, by delineating correlations between the studied variables, as well as displaying a reliability matrix for all the scales.

First, a reliability matrix will be presented for MHI-38, then hypothesis testing will take place in the form of correlation matrixes, each time taking a different component of the demographic variables, and generating the relevant correlations.

Some of the correlation matrixes will not be displayed in this chapter, but will instead be featured in one of the Appendixes.

In evaluating and interpreting effect size, this study will use Cohen's (1988) values for effect size, as represented in the tables 0.1 and 0.2 below:

Table 0.1 – Cohen's effect size guidelines for Pearson's r or correlation coefficient

Effect size	r
Small	0.10
Medium	0.30
Large	0.50

Table 0.2 – Cohen's (1988) effect size guidelines for differences between means

Effect size	d
Small	0.20
Medium	0.50
Large	0.80

Reliability Testing

Table 1.0 - Cronbach Alfa for the Mental Health Inventory (MHI-38) and its subscales

Subscale	Cronbach's Alpha
Mental Health Index	.702
Anxiety	.859
Depression	.745
Loss of Behavioral / Emotional Control	.803
General Positive Affect	.879
Emotional Ties	.586
Psychological Distress	.889
Psychological Well-being	.889

Based on the computed reliability scores, Mental Health Inventory (MHI-38) and all of its subscales and global scales are considered reliable enough for research purposes.

Descriptive Statistics

Table 1.1 – Descriptive Statistics for Social Interest for both sexes and for the total population.

Sex	N	Minimum	Maximum	Mean	Std. Deviation

Female	Social Interest Scale	113	1	14	8.35	2.556
Male	Social Interest Scale	45	3	15	8.47	2.668
Total	Social Interest Scale	158	1	15	8.38	2.580

Table 1.1 shows that the mean score for Social Interest in the population is 8.38 out of a possible 15, with a standard deviation of 2.5. Similar scores were seen when the population was divided by Sex, with Males scoring at a mean of 8.47, and Females at 8.35 with standard deviations of 2.6 and 2.5 respectively. These numbers match the results from Crandall's (1984) reports on the Social Interest Scale, where he had found a mean of 8.43 and a standard deviation of 3.57. This suggests that the levels and expression of Social Interest of the studied population conforms to that of previous studies that used the same scale.

Table 1.2 – Descriptive Statistics for the Mental Health Index (MHI-38), its subscales and global scales in the total population.

	N	Minimum	Maximum	Mean	Std. Deviation
Anxiety	192	11	53	31.98	7.943
Depression	193	8	22	14.10	2.696

Loss of Behavioral / Emotional Control	193	11	50	26.33	7.661
General Positive Affect	193	16	45	29.67	5.722
Emotional Ties	193	2	12	7.49	2.469
Life Satisfaction	193	1	6	3.56	1.158
Psychological Distress	192	38	126	80.20	18.413
Psychological Well-Being	193	23	74	49.81	10.118
Mental Health Index	192	80	186	134.76	21.979
Valid N (listwise)	192				

Table 1.2 shows that scores for the Mental Health index in the total population to be 134.76 out of a possible 226, and its standard deviation (21.979) in the population.

Hypotheses Testing

To test the three hypotheses, a preliminary analysis involved examining the relationships between the variables (Anxiety, Depression, Loss of Behavioral/Emotional Control, General Positive Affect, Emotional Ties, Life Satisfaction, Psychological Distress, Psychological Well-being and Social Interest); by doing a two-tailed correlational study (Pearson), as displayed in Table 2.0 below.

Table 2.0 – Two-Tailed Person Correlations between the Social Interest Scale and MHI-38

		Anxiety	Depression	Loss of Behavioral / Emotional Control	General Positive Affect	Emotional Ties	Life Satisfaction	Psychological Distress	Psychological Well-Being	Mental Health Index	Social Interest Scale
Anxiety	Correlation	1	.668**	.719**	-.215**	-.250**	-.363**	.918**	-.465**	-.826**	.024
	Sig.		.000	.000	.003	.000	.000	.000	.000	.000	.764
	N	192	192	192	192	192	192	192	192	192	158
Depression	Correlation	.668**	1	.625**	-.290**	-.316**	-.398**	.743**	-.490**	-.753**	-.074
	Sig.	.000		.000	.000	.000	.000	.000	.000	.000	.352
	N	192	193	193	193	193	193	192	193	192	158
Loss of Behavioral / Emotional Control	Correlation	.719**	.625**	1	-.294**	-.426**	-.545**	.887**	-.655**	-.826**	.034
	Sig.	.000	.000		.000	.000	.000	.000	.000	.000	.670
	N	192	193	193	193	193	193	192	193	192	158
General Positive Affect	Correlation	-.215**	-.290**	-.294**	1	.251**	.572**	-.386**	.816**	.583**	.000
	Sig.	.003	.000	.000		.000	.000	.000	.000	.000	.999
	N	192	193	193	193	193	193	192	193	192	158
Emotional Ties	Correlation	-.250**	-.316**	-.426**	.251**	1	.310**	-.388**	.597**	.475**	.023
	Sig.	.000	.000	.000	.000		.000	.000	.000	.000	.774
	N	192	193	193	193	193	193	192	193	192	158
Life Satisfaction	Correlation	-.363**	-.398**	-.545**	.572**	.310**	1	-.540**	.731**	.635**	-.031
	Sig.	.000	.000	.000	.000	.000		.000	.000	.000	.695
	N	192	193	193	193	193	193	192	193	192	158

Psychological Distress	Correlation	.918**	.743**	.887**	-.386**	-.388**	-.540**	1	-.663**	-.931**	.028
	Sig.	.000	.000	.000	.000	.000	.000		.000	.000	.725
	N	192	192	192	192	192	192	192	192	192	158
Psychological Well-Being	Correlation	-.465**	-.490**	-.655**	.816**	.597**	.731**	-.663**	1	.832**	-.005
	Sig.	.000	.000	.000	.000	.000	.000	.000		.000	.949
	N	192	193	193	193	193	193	192	193	192	158
Mental Health Index	Correlation	-.826**	-.753**	-.826**	.583**	.475**	.635**	-.931**	.832**	1	.003
	Sig.	.000	.000	.000	.000	.000	.000	.000	.000		.974
	N	192	192	192	192	192	192	192	192	192	158
Social Interest Scale	Correlation	.024	-.074	.034	.000	.023	-.031	.028	-.005	.003	1
	Sig.	.764	.352	.670	.999	.774	.695	.725	.949	.974	
	N	158	158	158	158	158	158	158	158	158	158

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

Table 2.0 shows a positive correlation between the subscales Anxiety, Depression, Loss of Emotional/Behavioral Control, and the global scale Psychological Distress; a negative correlation between the subscales Anxiety, General Positive Affect, Emotional Ties, Life Satisfaction, the global scale Psychological Well-Being, and the general scale that is the Mental Health Index. Based on these global correlations, Social Interest does not correlate with any of MHI-38's subscales, global scales, or general score, indicating that there is no relationship between the study's participants' Mental Health and their levels of Social Interest.

H1 expected that the scores on the Depression scale will correlate with the scores on the Social Interest Scale, but as per the correlation matrix in Table 2.0, there seems to be no correlation between Depression and Social Interest in the total population.

Table 3.0 – Two-Tailed Person Correlations between the Social Interest Scale and the Depression, Life Satisfaction, Mental Health Index scales for Male and Female populations separately.

Sex			Depression	Life Satisfaction	Mental Health Index	Social Interest Scale
Female	Depression	Pearson Correlation	1	-.400**	-.732**	-.058
		Sig. (2-tailed)		.000	.000	.540
		N	131	131	130	113
	Life Satisfaction	Pearson Correlation	-.400**	1	.654**	-.057
		Sig. (2-tailed)	.000		.000	.547
		N	131	131	130	113
	Mental Health Index	Pearson Correlation	-.732**	.654**	1	-.043
		Sig. (2-tailed)	.000	.000		.649
		N	130	130	130	113
	Social Interest Scale	Pearson Correlation	-.058	-.057	-.043	1
		Sig. (2-tailed)	.540	.547	.649	
		N	113	113	113	113
Male	Depression	Pearson Correlation	1	-.400**	-.794**	-.100
		Sig. (2-tailed)		.001	.000	.512
		N	62	62	62	45
	Life Satisfaction	Pearson Correlation	-.400**	1	.611**	.034
		Sig. (2-tailed)	.001		.000	.826
		N	62	62	62	45
	Mental Health Index	Pearson Correlation	-.794**	.611**	1	.113
		Sig. (2-tailed)	.000	.000		.460
		N	62	62	62	45
	Social Interest Scale	Pearson Correlation	-.100	.034	.113	1
		Sig. (2-tailed)	.512	.826	.460	
		N	45	45	45	45

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

H2 expected that the scores of Males on Social Interest will not be correlated with their scores on the Depressions scale, and H3 expected that the scores of Females will be correlated with their scores on Social Interest Scale. While H2 is confirmed, H3 is not confirmed.

H4 expected for both males' and females' scores on the Depression scale to correlate with their scores on the Life Satisfaction, and as evidenced by Table 3.0, H4 is confirmed with r = -0.400 (medium effect size) for both correlations.

H5 expected a correlation between the Females' scores on Social Interest and their overall levels of Mental Health (Mental Health Index), and H6 expected no correlation between the Male participants' levels of Social Interest and their overall Mental Health, and as per Table 3.0 there seems to be no correlation between Females' levels of Social Interest and their levels of Mental Health, disconfirming H5, and as expected H6 is confirmed with the absence of a correlation between Males' levels of Mental Health and their levels of Social Interest.

Furthermore, Table 3.1 (see Appendix F) explores the correlation between Social Interest, and levels of the MHI-38 (Depression, Anxiety, Loss of Behavioral/Emotional Control, General Positive Affect, Emotional Ties, Life Satisfaction, Psychological Well-Being, Psychological Distress, and total Mental Health Index) for both the male and female population, and shows no correlation between Social Interest, and any of the constructs that make up Mental Health.

Table 4.0 – One Sample T-Test between the Social Interest Scale and participants who identified their preferred language as either English or Arabic, excluding participants who indicated any other language as their preferred language.

Participant's Preferred Language		N	Mean	Std. Deviation	Std. Error Mean
English	Participant's Preferred Language	90	1.00	.000[c]	.000
	Social Interest Scale	72	8.25	2.782	.328
Arabic	Participant's Preferred Language	78	3.00	.000[c]	.000
	Social Interest Scale	67	8.33	2.483	.303

H7 expected participants whose preferred language is English to score lower on the Social Interest Scale when compared to their Arabic-preferring counterparts, but given their negligible difference in both means and standard deviation, H7 was not confirmed.

Expansion on Research: Further Exploration

Table 5.0 - Two-Tailed Person Correlations between Social Interest and all aspects of the Mental Health Inventory for all participants who graduated from private schools before enrolling at their respective universities.

Formal School Type	Social Interest Scale	Anxiety	Depression	Loss of Behavioral / Emotional Control	General Positive Affect	Emotional Ties	Life Satisfaction	Psychological Distress	Psychological Well-Being	Mental Health Index

Private	Social Interest Scale	Pearson Correlation	1	-.025	-.109	-.005	.023	.035	-.020	-.020	.036	.062
		Sig. (2-tailed)		.771	.196	.951	.784	.681	.816	.816	.669	.461
		N	142	142	142	142	142	142	142	142	142	142
	Anxiety	Pearson Correlation	-.025	1	.678**	.697**	-.254**	-.233**	-.364**	.913**	-.473**	-.822**
		Sig. (2-tailed)	.771		.000	.000	.001	.002	.000	.000	.000	.000
		N	142	170	170	170	170	170	170	170	170	170
	Depression	Pearson Correlation	-.109	.678**	1	.620**	-.273**	-.293**	-.399**	.753**	-.472**	-.751**
		Sig. (2-tailed)	.196	.000		.000	.000	.000	.000	.000	.000	.000
		N	142	170	171	171	171	171	171	170	171	170
	Loss of Behavioral / Emotional Control	Pearson Correlation	-.005	.697**	.620**	1	-.321**	-.416**	-.561**	.880**	-.673**	-.820**
		Sig. (2-tailed)	.951	.000	.000		.000	.000	.000	.000	.000	.000
		N	142	170	171	171	171	171	171	170	171	170
	General Positive Affect	Pearson Correlation	.023	-.254**	-.273**	-.321**	1	.231**	.588**	-.420**	.819**	.612**
		Sig. (2-tailed)	.784	.001	.000	.000		.002	.000	.000	.000	.000
		N	142	170	171	171	171	171	171	170	171	170
	Emotional Ties	Pearson Correlation	.035	-.233**	-.293**	-.416**	.231**	1	.284**	-.373**	.580**	.454**
		Sig. (2-tailed)	.681	.002	.000	.000	.002		.000	.000	.000	.000
		N	142	170	171	171	171	171	171	170	171	170
	Life Satisfaction	Pearson Correlation	-.020	-.364**	-.399**	-.561**	.588**	.284**	1	-.547**	.733**	.638**
		Sig. (2-tailed)	.816	.000	.000	.000	.000	.000		.000	.000	.000

	N	142	170	171	171	171	171	171	170	171	170
Psychological Distress	Pearson Correlation	-.020	.913**	.753**	.880**	-.420**	-.373**	-.547**	1	-.675**	-.931**
	Sig. (2-tailed)	.816	.000	.000	.000	.000	.000	.000		.000	.000
	N	142	170	170	170	170	170	170	170	170	170
Psychological Well-Being	Pearson Correlation	.036	-.473**	-.472**	-.673**	.819**	.580**	.733**	-.675**	1	.838**
	Sig. (2-tailed)	.669	.000	.000	.000	.000	.000	.000	.000		.000
	N	142	170	171	171	171	171	171	170	171	170
Mental Health Index	Pearson Correlation	.062	-.822**	-.751**	-.820**	.612**	.454**	.638**	-.931**	.838**	1
	Sig. (2-tailed)	.461	.000	.000	.000	.000	.000	.000	.000	.000	
	N	142	170	170	170	170	170	170	170	170	170

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

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

Table 5.0 and 5.1 (Appendix G) indicate that there is no correlation between the studied variables and participants' formal school system.

Table 6.0 - Two-Tailed Person Correlations between Social Interest Mental Health Index and the two global scales of MHI-38: Psychological Well-Being and Psychological Distress.

Siblings			Social Interest Scale	Psychological Distress	Psychological Well-Being	Mental Health Index
0	Social Interest Scale	Pearson Correlation	1	-.196	.245	.222
		Sig. (2-tailed)		.613	.525	.565
		N	9	9	9	9
	Psychological Distress	Pearson Correlation	-.196	1	-.609	-.885**
		Sig. (2-tailed)	.613		.082	.002
		N	9	9	9	9

	Psychological Well-Being	Pearson Correlation	.245	-.609	1	.875**
		Sig. (2-tailed)	.525	.082		.002
		N	9	9	9	9
	Mental Health Index	Pearson Correlation	.222	-.885**	.875**	1
		Sig. (2-tailed)	.565	.002	.002	
		N	9	9	9	9
1	Social Interest Scale	Pearson Correlation	1	.031	-.092	.009
		Sig. (2-tailed)		.858	.592	.957
		N	36	36	36	36
	Psychological Distress	Pearson Correlation	.031	1	-.623**	-.911**
		Sig. (2-tailed)	.858		.000	.000
		N	36	44	44	44
	Psychological Well-Being	Pearson Correlation	-.092	-.623**	1	.842**
		Sig. (2-tailed)	.592	.000		.000
		N	36	44	44	44
	Mental Health Index	Pearson Correlation	.009	-.911**	.842**	1
		Sig. (2-tailed)	.957	.000	.000	
		N	36	44	44	44
2	Social Interest Scale	Pearson Correlation	1	-.016	.138	.059
		Sig. (2-tailed)		.900	.280	.645
		N	63	63	63	63
	Psychological Distress	Pearson Correlation	-.016	1	-.621**	-.928**
		Sig. (2-tailed)	.900		.000	.000
		N	63	77	77	77
	Psychological Well-Being	Pearson Correlation	.138	-.621**	1	.794**
		Sig. (2-tailed)	.280	.000		.000
		N	63	77	78	77
	Mental Health Index	Pearson Correlation	.059	-.928**	.794**	1
		Sig. (2-tailed)	.645	.000	.000	
		N	63	77	77	77
3+	Social Interest Scale	Pearson Correlation	1	.191	-.122	-.185
		Sig. (2-tailed)		.184	.400	.198
		N	50	50	50	50
	Psychological Distress	Pearson Correlation	.191	1	-.777**	-.955**
		Sig. (2-tailed)	.184		.000	.000
		N	50	62	62	62
	Psychological Well-Being	Pearson Correlation	-.122	-.777**	1	.884**
		Sig. (2-tailed)	.400	.000		.000
		N	50	62	62	62
	Mental Health Index	Pearson Correlation	-.185	-.955**	.884**	1
		Sig. (2-tailed)	.198	.000	.000	
		N	50	62	62	62

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

Table 6.0 shows that there is no correlation between the number of siblings participants have, and their levels of Social Interest, and the same is true for participants' levels of Social Interest and their religious preferences (Appendix H: Table 6.1), whether they have lived the majority of their lives in Lebanon or not (Appendix I: Table 6.2), and whether or not they are from the capital city of Beirut, or they come from other areas of Lebanon (Appendix J: Table 6.3).

Comparing Means

The following section will take each statistically valid demographic category on its own, and compare the difference of each group's means for the Social Interest Scale, and the Mental Health Inventory's two global scales (Psychological Well-Being and Psychological Distress) and its general value (Metal Health Index). This section will only feature results that showed to have statistical significance.

Table 7.0 – Independent sample t-test between participants with one sibling and participants with three or more siblings for Social Interest Scale, Psychological Distress, Psychological Well-Being and Mental Health Index

		Levene's Test for Equality of Variances		t-test for Equality of Means				
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Social Interest Scale	Equal variances assumed	1.476	.228	-2.928	84	.004*	-1.532	.523
Psychological Distress	Equal variances assumed	.476	.492	.719	104	.474	2.604	3.621

Psychological Well-Being	Equal variances assumed	.035	.853	.346	104	.730	.710	2.054
Mental Health Index	Equal variances assumed	.352	.554	-.588	104	.558	-2.584	4.392

Table 7.0 shows that there is a significant difference in the means scores of the Social Interest Scales for participants who have 1 sibling and participants who have 3 or more siblings (p = .004), with a mean difference of 1.532 in favor to participants with only one sibling, with a Cohen's d = 0.64, indicating a medium effect size.

Table 7.1 – Independent sample t-test between participants with two sibling and participants with three or more siblings for Social Interest Scale, Psychological Distress, Psychological Well-Being and Mental Health Index

		Levene's Test for Equality of Variances		t-test for Equality of Means				
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Social Interest Scale	Equal variances assumed	1.119	.292	-3.955	111	.000*	-1.862	.471
Psychological Distress	Equal variances assumed	.009	.923	1.498	137	.136	4.766	3.181
Psychological Well-Being	Equal variances assumed	.832	.363	.262	138	.794	.443	1.689

Mental Health Index	Equal variances assumed	.320	.573	-1.373	137	.172	-5.127	3.734

Table 7.1 shows that there is a significant difference in the means scores of the Social Interest Scales for participants who have 2 sibling and participants who have 3 or more siblings (p = .000), with a mean difference of 1.862 in favor of participants with 3 or more siblings, with a Cohden's d = 0.76, indicating a large effect size.

Table 7.2 Two-Tailed Person Correlations between the Social Interest Scale and participants' number of siblings.

		Siblings	Social Interest Scale
Siblings	Pearson Correlation	1	.220**
	Sig. (2-tailed)		.005
	N	193	158
Social Interest Scale	Pearson Correlation	.220**	1
	Sig. (2-tailed)	.005	
	N	158	158

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

Table 7.2 shows a positive correlation between participants' scores on the Social Interest Scale and the number of siblings they have (r = .220), suggesting that participants with more siblings have higher levels of Social Interest.

Table 8.0 Independent sample t-test for Female and Male participants for Social Interest Scale, Psychological Distress, Psychological Well-Being and Mental Health Index.

	Levene's Test for Equality of Variances		t-test for Equality of Means				
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference

Social Interest Scale	Equal variances assumed	.380	.538	-.266	156	.790	-.122	.456
Psychological Distress	Equal variances assumed	2.682	.103	3.349	190	.001*	9.273	2.769
Psychological Well-Being	Equal variances assumed	1.567	.212	-1.708	191	.089	-2.651	1.552
Mental Health Index	Equal variances assumed	1.950	.164	-2.156	190	.032*	-7.246	3.360

Table 8.0 shows that there is a significant difference in the means scores of the female participants' Psychological Distress (p = .001) and on the Mental Health Index (p = .032), suggesting that the female participants have on average significantly higher levels of Psychological distress when compared to males with a medium effect size (Cohen's d = 0.49), and that the male participants' average Mental Health is significantly better than that of females with a small effect size (Cohend's d = 0.32).

Summary of Results

Hypothesis Testing and Further Exploration both revealed surprising results. It seems that the population in this study, in average, has an average level of Social Interest, at an average means and average standard deviation, with a normal distribution of values (Appendix I), but the data also suggest that while the studied population has a normal level and distribution of Social Interest, said Social Interest is

in no significant way interacting with the variables it is expected for it to vary with. That is to say, where a positive correlation was expected between Mental Health, and specifically Psychological Well-Being, none was found, and where a negative correlation was expected between Social Interest and Psychological Distress, once again, none was present.

The results of Hypothesis Testing did yield some expected results by confirming some of the hypotheses (H2, H4, H6), while surprisingly disconfirming others (H1, H3, H5, H7), and the more in-depth analysis of the data that took specific demographic differences into consideration yielded no different results than the trend observed in the total population.

Further analysis showed that there is a positive correlation between the number of siblings participants have and their levels of Social Interest, and finally means' comparison showed that overall, male participants have significantly higher levels of Mental Health than their female counterparts.

Chapter V: DISCUSSION

This chapter presents the discussion of the study which investigated the relationships between Social Interest, Anxiety, Depression, Loss of Behavioral/Emotional Control, General Positive Affect, Emotional Ties, Life Satisfaction, Psychological Distress, Psychological Well-Being and Mental Health Index, and a myriad of demographic differences.

This chapter is divided into three main sections. First, there will be a discussion of the results, followed by a discussion of the study's limitations, then some recommendations for future research, and finally, a set of implications drawn from the findings of this study.

Discussion of Findings

The purpose of this study was to investigate the interplay between Social Interest and Mental Health with its many components (Anxiety, Depression, Loss of Behavioral/Emotional Control, General Positive Affect, Emotional Ties, Life Satisfaction, Psychological Distress, and Psychological Well-Being), and to bring to light any demographic differences that may be influencing the relationship between Social Interest and Mental Health.

The first hypothesis, which predicted that the scores on Social Interest will correlate with the scores on the Depression scale was not supported, suggesting that the levels of Depression in the studied population are not affected by their levels of Social Interest, and the same was evidently true for the population's levels of Anxiety, Loss of Behavioral and Emotional Control, General Positive Affect, Emotional Ties, Life Satisfaction, Psychological Distress, and Psychological Well-Being, in other words, all levels of Mental Health, also effectively disconfirming the third and fourth

hypothesis, whereby it was expected that Females' scores on the Social Interest Scale would be correlated with their scores on the Depression scale, and that Females' scores on the Social Interest Scale would be correlated with their scores on the Mental Health Index. All of these findings are not only contradictory to all previous research conducted on Social Interest and its function in peoples' mental health (A. Adler, 1956; Alfred Adler, 1938; Aslinia et al., 2011; Bash, 2015; J. E. Crandall, 1981; James E Crandall & Biaggio, 1984; Johnson & Smith, 2011; Gary K. Leak, 2006; Gary K. Leak et al., 1985; Gary K Leak & Williams, 1989), but also contradictory to results previously obtained by this study's investigator (Kavlakian, 2014). It was already expected that Males' scores on the Social Interest Scale would not correlate with their scores on the Depression, Life Satisfaction, and by proxy overall Mental Health Index based on previous results (Kavlakian, 2014), which resulted in the confirmation of the second, fourth, and sixth hypotheses, which are contradictory findings to all other research published on the topic of Social Interest, since Adler coined the term.

In other words, the present study was expecting to confirm that in the Male population, there is no correlation between Social Interest and Mental Health, which it did, but it was still expecting for Social Interest to be affecting Females' levels and components of Mental Health, which it did not, rendering the whole population non-conforming to the theory of Social Interest, as it has been understood up to the present time.

The nonconformity of males to the theory of Social Interest was previously observed, and attributed to their significantly lower scores on the Social Interest Scale when compared to the scores of females, it was also hypothesized that males do not express their Social Interest in vivo as frequently as females do, hence do not have

equal chances of benefitting from the effects of having normal or high levels of Social Interest, and the third hypothesis was that the way males get feedback on their expression of Social Interest, is non-reinforcing, or limited, and consequently does not lead for their levels of Social Interest to have a direct link with their levels of Depression (Kavlakian, 2014). However some four years later, with the present study, it now becomes evident that it is not only males whose Social Interest is not affecting or is affected by their Mental Health, but it is also females' Social Interest that does not seem to have a direct relationship with their Mental Health, both when it comes to their mental well-being and distress.

Multiple possibilities exist, that could explain the lack of correlation between Social Interest and Mental Health in the population, chief among which is the possibility that the Adlerian notion of Social Interest, that is to say the drive to cooperate with the society for the common good of mankind, is no longer a socially desirable and rewarded factor in social interactions, which suggests that the social support that is crucial to a person's mental health (Bell, Kulkarni, & Dalton, 2003; Gary K Leak & Williams, 1989; McAuliffe, Jetten, Hornsey, & Hogg, 2003; Michalopoulos & Aparicio, 2012; Mozdzierz & Semyck, 1980; Olff et al., 2014; Watkins, 1994; Zarski, Bubenzer, & West, 1983), that was once predicated on a person having high levels of Adlerian Social Interest (A. Adler, 1956; Alfred Adler, 1938; Aslinia et al., 2011; Bash, 2015; James E Crandall, 1984; Gary K Leak & Williams, 1989), is no longer centered around Social Interest, but some other, yet to be documented construct, in an ever-changing, and evolving world, especially with the advent and impact that Social Media has had on human relationships and probably Social Support , whereby some researchers believe that Social Media interactions can be used to predict incidence of depression (De Choudhury, Gamon, Counts, &

Horvitz, 2013), while others claim that the future of mental health-care lies in peer-to-peer interactions on social media (Naslund, Aschbrenner, Marsch, & Bartels, 2016).

It does indeed seem nowadays, especially for the generation examined in the current study, that more importance is given to the number of friends a person has on Facebook than in real life, more importance is given to the number of followers a person has on Twitter than in society (Durga, Bharathi, Murthy, & Devasena, 2015), and it seem like more importance is given to how many "likes" a person receives on Instagram, rather than to actually be liked by people.

In fact, Anthes (2016) has shown the rapidly increasing rate of mobile phone usage worldwide, and indicates an increase of 887% in global smartphone usage between the years of 2010 and 2016, and projected said increase to reach over 1,100% in 2018. Furthermore, she indicates whopping 34% increase in smartphone usage in developing counties (of which Lebanon is one) between the years of 2013 and 2018 (Anthes, 2016), which fall in line with the theory of social media, further replacing face-to-face human contact and interactions, in favor of an online presence.

The second possible reason for why the scores on Social Interest in the population do not seem to correlate with Mental Health in all its facets, could be an antithesis to the first possibility advanced above which suggested that a new set of "rules" or desired characteristics and behaviors instead of Social Interest are now governing who and how much social support a person receives, and could be that social support is no longer predicated on a person's levels of Social Interest, but instead is given freely to all members of the society, regardless of how much Social Interest a person may have.

In other words, while as the data shows, people still seem to value within themselves traits that are characteristic of Adlerian Social Interest, they may be indiscriminately giving and receiving social support to all members of their respective communities, without regard to their, or others' levels of Social Interest. The motivations behind this behavior could be many, and could be intrinsic, starting with a sense of accomplishment and goodness for having helped someone else, and ending with modeling a desired behavior to others, in the hope of being treated in the same way by others; it could also be extrinsic, to be praised by others, or simply pave the way for reciprocal help from others (Lockwood et al., 2017).

Keeping in mind that the population studied consists purely of university students, who in Lebanon constitute the largest strata of people seeking mental health services, it might be important to have a more in-depth understanding of the mechanics that are nowadays driving social support, since Social Interest no longer seems to be a ruling factor; one that accounts for the generational gap between university students of this era, compared to previous ones such as in the Crandall research (J. E. Crandall, 1981).

A third, and more grim possible reason for Social Interest not correlating with Mental Health in the studied population, could be the due to a new phenomenon, whereby people simply do not receive social support. Meaning, regardless and despite peoples' levels of Social Interest, social support is no longer given to people by their peers, communities, or societies, and the social fabric in Lebanon has somehow over the years become one where people can no longer rely on one another, and people have evolved to a state where they no longer rely on social support for their personal well-being, for why else would the population's scores on both Social Interest and Mental Health be within the normal range and on a normal distribution, yet have

Social Interest see no significant correlation with even one out of the seven aspects that constitute the totality of a person's Mental Health?

In other words, the cycle may of Social Interest leading to better Social Support leading to better Mental Health may have been broken. Since the data suggests normal levels and distributions for the former and latter, the only remaining factor in the equation is then Social Support. If Social Interest was providing people with Social Support, then a significant correlation would have been observed in the results between Social Interest and Mental Health, since recent studies still show Social Support as being the primary resource in the safeguard and overcoming of people from mental health problems.

It could be the community itself, peoples' lifestyles, and their education. To elaborate, this researcher hypothesizes that it is possible for people to have learned, acquired, and gained the necessary skills to safeguard themselves from poor mental health, without counting on social support, present or not as it may be in their lives. People have been thought or have learned to become more resilient, and/or may have access to more qualified, specialized sources of mental health support such as therapists and counselors, and no longer need to rely on social support for their mental well-being. This certainly falls in line with the increasing specialization of education, peoples' knowledge and understanding that asking help from experts is better than asking from a layperson. When this, is factored in with the rapidly decreasing taboo of people seeking mental health services in Lebanon, especially among college-aged students (El Kahi, Rizk, Hlais, & Adib, 2012), and said age group's understanding that their mental health is as important as their physical health, and the importance of seeking the services of a counselor or therapist when the need arises, could be why Social Interest is no longer a determining factor in peoples' Mental Health.

Furthermore, to link two of the possible explanations, this researcher proposes that the decrease in taboo and added awareness of mental health difficulties may have lead people to seek not only more specialized advice, but to also rely on their smartphones for such advice. In fact, Anthes (2016) reports that even back in 2016, there were over 15,000 smartphone applications dedicated to different diseases; over 30% of which were specific to mental health issues, and while smartphone applications cannot be categorized as "expert advice", they nonetheless play a big role in peoples' access to self-help guidelines, resources, and local referrals to mental health clinics, and mental health professionals, further decreasing the need for peer-to-peer disclosure, hence the unused potential of Social Interest, but also increase of peoples' self-reliance, and levels of resilience.

In short, it seems like Social Interest while still is present, is no longer functioning the way it has been theorized and in the past said to function, which makes this researcher ask: If Social Interest is no longer safeguarding people against mental health problems, then what is?

When answering research questions, further exploring the data, and testing the final hypothesis (H7), it was interesting not to find any major differences in the levels of Social Interest or Mental Health for specific demographic slices on the population. H7 expected participants whose preferred language is English to score lower on the Social Interest Scale than people whose preferred language was Arabic, following a previous study (Ayyash-Abdo, 2001) where it was shown that people whose preferred language was English, scored lower on the Collectivism scale, which in turn was correlated with lower levels of Social Interest (McAuliffe et al., 2003). This hypothesis was not confirmed (Appendix J), but further exploration of demographic differences suggested two other noteworthy results.

First, when comparing means between groups, it became evident that the mean score on the Social Interest Scale for participants who had three or more siblings, was significantly higher than those with fewer siblings, which prompted a correlative analysis, which in turn demonstrated a two-tailed positive correlation between Social Interest and participants' number of siblings (Table 7.2). This result while unexpected, seems commonsense after the fact, because people living in larger families typically require a higher degree of cooperation (James E Crandall & Harris, 1976), sharing, supporting and prioritizing one another over one's self, it is therefore reasonable for participants with more siblings, to have higher levels of Social Interest.

Finally, when comparing inter-group means, one last significant demographic difference emerged from the results: one suggesting that on average, males have higher levels of mental health than females, due to females' higher levels of Psychological Distress (Table 8.0). These results are expected for females, following a myriad of examples in the literature on gender differences in mental health, where women's average mental health has almost always been reported to be lower than that of males; usually attributed to females reporting their distress more frequently, and males minimalizing their own distress (Chandra & Minkovitz, 2006; Emslie et al., 2002; Fredrickson & Roberts, 1997; Makhoul et al., 2011)

It is worth restating that while Social Interest is said to safeguard against Psychological Distress, its actual worth has always been in promoting Psychological Well-Being, and not counteracting the effects of Psychological Distress (Alfred Adler, 1938; Aslinia et al., 2011; J. E. Crandall, 1981).

Summary, Implications, and Concluding Remarks

Social Interest has no implications on Mental Health… at least in this population.

While the researcher did not expect for Social Interest to correlate with some aspects of Mental Health (especially in males), he did nevertheless expect some aspects of Social Interest, namely the constructs under the umbrella of Psychological Well-Being that make up half of the whole of Mental Health.

The results were partly expected, especially those pertaining to the male population, which in turn was inspired by a previous study conducted by this researcher, whereby Social Interest did not seem to have any impact on Depression or even Life Satisfaction of males, he had however no reason to expect that Social Interest and Mental Health would not have a significant correlation in females as well.

The findings also showed that while Social Interest did not correlate with any aspect of Mental Health, on average the population still had average scores on both the scale for Social Interest and the scale for Mental Health, with a normal distribution in both instances, meaning in the absence of Social Interest's protective factors, peoples' Mental Health did not plummet, but was still at normal levels, suggesting alternative mechanisms substituting for Social Interest, in promoting the participants' mental health.

One of the theories this researcher advanced to explain this new and unexpected phenomenon, was that social support was no longer predicated on peoples' levels of Social Interest, but some other yet to be discovered factor, citing the advance which Social Media has made in recent years (Facebook, Instagram and the like), and the exclusive attention that it has gotten from especially the generation that comprises this

study's population, and how the impersonal digital presence seems to have become more important to many if not most people of that generation, to the point of perhaps surpassing or neutralizing the effects of Social Interest on Mental Health.

The second theory proposed by the researcher explaining this newly observed phenomenon in the population, was that people may be giving one another social support in times of need, regardless of the recipient's levels of Social Interest. In other words, people are able to maintain a significant degree of social support, without having to give anything back to the society or environment that is supporting them to begin with.

Third, was the theory that people are no longer receiving social support from their peers, either because they no longer need it (having become more resilient or resourceful, perhaps seeking specialized help from therapists), or because social support is no longer freely given simply because a person in one's community has high levels of social interest.

The topics of Social Interest and especially Social Support, while highly praised for their role in safeguarding and remedying people from mental health conditions, and building resilience in people, have seen relatively very little to no research, and even less so in the Middle East and the MENA region, and results such as the ones obtained in this research are both frightening and exciting to at least the research. A new phenomenon seems to have crept into peoples' lives, and with the whole of the psychological community seemingly oblivious to it, no one has yet researched it. It is frightening that such changes may have occurred without anyone's notice, but it is also exciting, because there may finally be "something new under the sun", opening new horizons for research, that would and should in this researcher's opinion, change the focus and provision of at least psychosocial support if not

psychotherapeutic services for the generations studied in the dissertation, since social interest is evidently no longer a protective or remedial factor against poor mental health, and if said new factors are discovered, they could potentially help clinical psychologists in the customization of therapy based on those, yet to be discovered factors.

Limitations

The nature of the task that this study undertook: administering a valid, reliable, and comprehensive scale to measuring the participants' levels of mental health, along with a measure for Social Interest and a detailed demographic questionnaire, also brought with itself its one unexpected limitation, which is the sample size of this research. Being comprised of 12 pages, the questionnaire packet seemed too intimidating to most students who were approached and asked to participate in this effort. Fortunately, persistence paid off, and resulted in a significant number of participants who consented to be part of this research and volunteered to fill out a questionnaire packet, and the final sample size was large enough for the researcher to draw some generalizations from the results.

Additionally, the unforeseen results also leaves the researcher with the wish to have had the foresight to include a section on smartphone and social media usage in the demographic questionnaire, to conduct an exploration between the population's levels of smartphone usage and their mental health, and social interest.

Recommendations for Future Research

With Social Interest seemingly out of the picture, the dynamics of Social Support should inadvertently have changed. What percentage of a person's mental health, is then provided or safeguarded by Social Support? Is Social Support even still a deciding factor in mental health for people from the studied generations? How is it that on average people are able to maintain a normal level of mental health, without the benefits of Social Interest and perhaps even those of Social Support? Is the target generation that much more resilient than previous ones? Which part of peoples' lives then –if not Social Interest, is correlated with their Mental Health?

This researcher recommends further exploration of this unprecedented phenomenon, to not only ascertain why Social Interest is not correlated with Mental Health, but also what is correlating or influencing Mental Health in the absence of Social Interest.

Yet another "wave" may be upon us.

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APPENDIX A

Social Interest Scale

Directions: Below are a number of pairs of personal characteristics or traits.
For each pair, check the trait which you value more highly.

In making each choice, ask yourself which of the traits in that pair you would rather possess as one of your own characteristics.

For example, the first pair is “imaginative – rational”.
If you had to make a choice, which would you rather be?

Note: Some of the traits will appear twice, but always in combination with a different trait. No pairs will be repeated.

"I would rather be..."

Imaginative		Rational	
Helpful		Quick-witted	
Neat		Sympathetic	
Level-headed		Efficient	
Intelligent		Considerate	
Self-reliant		Ambitious	
Respectful		Original	
Creative		Sensible	
Generous		Individualistic	
Responsible		Original	
Capable		Tolerant	
Trustworthy		Wise	
Neat		Logical	
Forgiving		Gentle	
Efficient		Respectful	
Practical		Self-confident	
Capable		Independent	
Alert		Cooperative	
Imaginative		Helpful	
Realistic		Moral	
Considerate		Wise	
Sympathetic		Individualistic	
Ambitious		Patient	
Reasonable		Quick-witted	

APPENDIX B

The mental health inventory (MHI)

Instructions: Please read each question and tick the box by the **one** statement that best describes how things have been **for you** during the past month.
There are no right or wrong answers.

1. **How happy, satisfied, or pleased have you been with your personal life during the past month? *(Tick one)***

   - [ ] Extremely happy, could not have been more satisfied or pleased
   - [ ] Very happy most of the time.
   - [ ] Generally satisfied, pleased
   - [ ] Sometimes fairly satisfied, sometimes fairly unhappy
   - [ ] Generally dissatisfied, unhappy
   - [ ] Very dissatisfied, unhappy most of the time

2. **How much of the time have you felt lonely during the past month? *(Tick one)***

   - [ ] All of the time
   - [ ] Most of the time
   - [ ] A good bit of the time
   - [ ] Some of the time
   - [ ] A little of the time
   - [ ] None of the time

3. **How often did you become nervous or jumpy when faced with excitement or unexpected situations during the past month? *(Tick one)***

   - [ ] Always
   - [ ] Very often
   - [ ] Fairly often
   - [ ] Sometimes
   - [ ] Almost never
   - [ ] Never

4. **During the past month, how much of the time have you felt that the future looks hopeful and promising? *(Tick one)***

   - [ ] All of the time
   - [ ] Most of the time
   - [ ] A good bit of the time
   - [ ] Some of the time
   - [ ] A little of the time
   - [ ] None of the time

5. **How much of the time, during the past month, has your daily life been full of things that were interesting to you? *(Tick one)***

   - [ ] All of the time
   - [ ] Most of the time
   - [ ] A good bit of the time
   - [ ] Some of the time
   - [ ] A little of the time
   - [ ] None of the time

6. **How much of the time, during the past month, did you feel relaxed and free of tension? *(Tick one)***

   - [ ] All of the time
   - [ ] Most of the time
   - [ ] A good bit of the time
   - [ ] Some of the time
   - [ ] A little of the time
   - [ ] None of the time

7. **During the past month, how much of the time have you generally enjoyed the things you do? *(Tick one)***

   - [ ] All of the time
   - [ ] Most of the time
   - [ ] A good bit of the time
   - [ ] Some of the time
   - [ ] A little of the time
   - [ ] None of the time

8. **During the past month, have you had any reason to wonder if you were losing your mind, or losing control over the way you act, talk, think, feel, or of your memory? *(Tick one)***

   - [ ] No, not at all
   - [ ] Maybe a little
   - [ ] Yes, but not enough to be concerned or worried about it
   - [ ] Yes, and I have been a little concerned
   - [ ] Yes, and I am quite concerned
   - [ ] Yes, and I am very much concerned about it

9. **Did you feel depressed during the past month? *(Tick one)***

   - [ ] No, not at all
   - [ ] Maybe a little
   - [ ] Yes, but not enough to be concerned or worried about it
   - [ ] Yes, and I have been a little concerned
   - [ ] Yes, and I am quite concerned
   - [ ] Yes, and I am very much concerned about it

10. **During the past month, how much of the time have you felt loved and wanted? *(Tick one)***

    - [ ] All of the time
    - [ ] Most of the time
    - [ ] A good bit of the time
    - [ ] Some of the time
    - [ ] A little of the time
    - [ ] None of the time

11. **How much of the time, during the past month, have you been a very nervous person? *(Tick one)***

    - [ ] All of the time
    - [ ] Most of the time
    - [ ] A good bit of the time
    - [ ] Some of the time
    - [ ] A little of the time
    - [ ] None of the time

12. **When you got up in the morning, this past month, about how often did you expect to have an interesting day? *(Tick one)***

    - [ ] Always
    - [ ] Very often
    - [ ] Fairly often
    - [ ] Sometimes
    - [ ] Almost never
    - [ ] Never

13. **During the past month, how much of the time have you felt tense or "high-strung"? *(Tick one)***

    - [ ] All of the time
    - [ ] Most of the time
    - [ ] A good bit of the time
    - [ ] Some of the time
    - [ ] A little of the time
    - [ ] None of the time

14. **During the past month, have you been in firm control of your behavior, thoughts, emotions or feelings? *(Tick one)***

    - [ ] Yes, very definitely
    - [ ] Yes, for the most part
    - [ ] Yes, I guess so
    - [ ] No, not too well
    - [ ] No, and I am somewhat disturbed
    - [ ] No, and I am very disturbed

15. **During the. past month, how often did your hands shake when you tried to do something? *(Tick one)***

    - [ ] Always
    - [ ] Very often
    - [ ] Fairly often
    - [ ] Sometimes
    - [ ] Almost never
    - [ ] Never

16. **During the past month, how often did you feel that you had nothing to look forward to? *(Tick one)***

    - [ ] Always
    - [ ] Very often
    - [ ] Fairly often
    - [ ] Sometimes
    - [ ] Almost never
    - [ ] Never

17. **How much of the time, during the past month, have you felt calm and peaceful? *(Tick one)***

    - [ ] All of the time
    - [ ] Most of the time
    - [ ] A good bit of the time
    - [ ] Some of the time

- [ ] A little of the time
- [ ] None of the time

18. **How much of the time, during the past month, have you felt emotionally stable? *(Tick one)***

- [ ] All of the time
- [ ] Most of the time
- [ ] A good bit of the time
- [ ] Some of the time
- [ ] A little of the time
- [ ] None of the time

19. **How much of the time, during the past month, have you felt downhearted and blue? *(Tick one)***

- [ ] All of the time
- [ ] Most of the time
- [ ] A good bit of the time
- [ ] Some of the time
- [ ] A little of the time
- [ ] None of the time

20. **How often have you felt like crying, during the past month? *(Tick one)***

- [ ] Always
- [ ] Very often
- [ ] Fairly often
- [ ] Sometimes
- [ ] Almost never
- [ ] Never

21. **During the past month, how often did you feel that others would be better off if you were dead? *(Tick one)***

- [ ] Always
- [ ] Very often
- [ ] Fairly often
- [ ] Sometimes
- [ ] Almost never
- [ ] Never

22. **How much of the time, during the past month, were you able to relax without difficulty? *(Tick one)***

- [ ] All of the time
- [ ] Most of the time
- [ ] A good bit of the time
- [ ] Some of the time
- [ ] A little of the time
- [ ] None of the time

23. **How much of the time, during the past month, did you feel that your love relationships, loving and being loved, were full and complete? *(Tick one)***

- [ ] All of the time
- [ ] Most of the time

- [ ] A good bit of the time
- [ ] Some of the time
- [ ] A little of the time
- [ ] None of the time

24. **How often, during the past month did you feel that nothing turned out for you the way you wanted it to? *(Tick one)***

- [ ] Always
- [ ] Very often
- [ ] Fairly often
- [ ] Sometimes
- [ ] Almost never
- [ ] Never

25. **How much have you been bothered by nervousness, or your "nerves", during the past month? *(Tick one)***

- [ ] Extremely so, to the point where I could not take care of things
- [ ] Very much bothered
- [ ] Fairly often
- [ ] Bothered some, enough to notice
- [ ] Bothered just a little by nerves
- [ ] Not bothered at all by this

26. **During the past month, how much of the time has living been a wonderful adventure for you? *(Tick one)***

- [ ] All of the time
- [ ] Most of the time
- [ ] A good bit of the time
- [ ] Some of the time
- [ ] A little of the time
- [ ] None of the time

27. **How often, during the past month, have you felt so down in the dumps that nothing could cheer you up? *(Tick one)***

- [ ] Always
- [ ] Very often
- [ ] Fairly often
- [ ] Sometimes
- [ ] Almost never
- [ ] Never

28. **During the past month, did you think about taking your own life? *(Tick one)***

- [ ] Yes, very often
- [ ] Yes, fairly often
- [ ] Yes, a couple of times
- [ ] Yes, at one time
- [ ] No, never

29. **During the past month, how much of the time have you felt restless, fidgety, or impatient? *(Tick one)***

- [ ] All of the time
- [ ] Most of the time
- [ ] A good bit of the time

- [ ] Some of the time
- [ ] A little of the time
- [ ] None of the time

30. **During the past month, how much of the time have you been moody or brooded about things? *(Tick one)***

- [ ] All of the time
- [ ] Most of the time
- [ ] A good bit of the time
- [ ] Some of the time
- [ ] A little of the time
- [ ] None of the time

31. **How much of the time, during the past month, have you felt cheerful, light-hearted? *(Tick one)***

- [ ] All of the time
- [ ] Most of the time
- [ ] A good bit of the time
- [ ] Some of the time
- [ ] A little of the time
- [ ] None of the time

32. **During the past month, how often did you get rattled, upset, or flustered? *(Tick one)***

- [ ] Always
- [ ] Very often
- [ ] Fairly often
- [ ] Sometimes
- [ ] Almost never
- [ ] Never

33. **During the past month, have you been anxious or worried? (Tick one)**

- [ ] Yes, extremely so to the point of being sick or almost sick
- [ ] Yes, very much so
- [ ] Yes, quite a bit
- [ ] Yes, some, enough to bother me
- [ ] Yes a little bit
- [ ] No, not at all

34. **During the past month, how much of the time were you a happy person? *(Tick one)***

- [ ] All of the time
- [ ] Most of the time
- [ ] A good bit of the time
- [ ] Some of the time
- [ ] A little of the time
- [ ] None of the time

35. **How often during the past month did you find yourself having difficulty trying to calm down? *(Tick one)***

- [ ] Always
- [ ] Very often
- [ ] Fairly often

- [ ] Sometimes
- [ ] Almost never
- [ ] Never

36. **During the past month, how much of the time have you been in low or very low spirits? *(Tick one)***

    - [ ] All of the time
    - [ ] Most of the time
    - [ ] A good bit of the time
    - [ ] Some of the time
    - [ ] A little of the time
    - [ ] None of the time

37. **How often, during the past month, have you been waking up feeling fresh and rested? *(Tick one)***

    - [ ] Always, every day
    - [ ] Almost every day
    - [ ] Most days
    - [ ] Some days, but usually not
    - [ ] Hardly ever
    - [ ] Never wake up feeling rested

38. **During the past month, have you been under or felt you were under any strain, stress or pressure? *(Tick one)***

    - [ ] Yes, almost more than I could stand or bear
    - [ ] Yes, quite a bit of pressure
    - [ ] Yes, some more than usual
    - [ ] Yes, some-but about normal
    - [ ] Yes, a little bit
    - [ ] No, not at all

APPENDIX C

Demographic Questionnaire

Please indicate your age:	_____ (ex: 22)
Please indicate your sex:	_____ (ex: female)
What type of degree are you <u>currently</u> pursuing?	_____ Undergraduate degree (BA, BS...) _____ Graduate degree (MA, MS...) _____ Postgraduate degree (PhD...)
Please indicate your major:	_____ (ex: Business)
Please indicate your parents' educational level: (write <u>Father</u> and/or <u>Mother</u> where it applies)	_____ Some school (did not graduate) _____ High school (Baccalaureate) _____ Undergraduate degree _____ Graduate Degree _____ Postgraduate degree
What type of high-school did you graduate from?	_____ Public _____ Private
What was your high-school's curriculum?	_____ American system _____ French system _____ Lebanese system _____ International system
How <u>many</u> languages can you speak?	_____ (ex: 3)
What is your <u>preferred</u> language?	_____ English

	_____ French _____ Arabic _____ Armenian _____ Other (specify)
Please indicate your economic status:	_____ High _____ Middle _____ Low
How many brothers and sisters do you have?	_____ (ex: 2)
What is your religious preference:	_____ I am not a religious person _____ Christian _____ Muslim _____ Druze _____ Other (specify) _____ Don't want to answer
I have lived the majority of my life in:	_____ Lebanon _____ Other (please indicate)
Which part of Lebanon are you originally from?	_____ Beirut (Beirut and its suburbs) _____ Mount Lebanon (Jbeil, Antelias,...) _____ South (Saida, Sour, Jezzine) _____ North (Tripoli, Batroun, Bsharri…) _____ Bekaa (Zahke, Baalbek, Anjar…)

APPENDIX D

Scarcity of Literature

The table below shows the number of hits received upon searching in the online databases of Harvard University for all English language publications.

The search parameters:

No "Discipline" restrictions were added to the search parameters.

No "Publication Date" restrictions were added to the search parameters.

No "Content Type" restrictions were added to the search parameters.

Only "Peer Reviewed" articles were displayed.

Reviews of articles were excluded from the results.

Hard-copy-only results were excluded from the results.

Search term	**Number of hits**
Mental Health	725,712
Depression	370,591
Life Satisfaction	49,659
Social Interest*****	**592**
Mental Health AND Social Interest*****	**59**
Depression AND Social Interest*****	**2**
Life Satisfaction AND Social Interest*****	**4**
Social Interest*****AND Lebanon	**0**

*****Search parameters on Social Interest include only Adlerian social interest, as there are many different concepts of social interest that are unrelated to the Adlerian concept of the term, that are inconsequential to this study.

To sources where articles were found: MEDLINE/PubMed (NLM), OneFile (GALE), **ProQuest** Social Science Journals, Health Reference Center Academic (**Gale**), **ScienceDirect** Journals (Elsevier), Elsevier (**CrossRef**), ProQuest Education Journals, SpringerLink, ProQuest Sociology, Springer (CrossRef), ABI/INFORM Global, Taylor & Francis Online - Journals, Informa - Taylor & Francis (CrossRef), **ERIC** (U.S. Dept. of Education), **Wiley** Online Library, Wiley (CrossRef), **JSTOR** Archival Journals, **PsycARTICLES** (American Psychological Association), Directory of Open Access Journals (DOAJ), Informa Healthcare Journals,…

APPENDIX E

Consent Form

Consent to participate in a Survey

I would like to invite you to participate in a research project. You are being asked to complete a questionnaire packet comprised of three surveys. I am a student at the University of Nicosia. I would appreciate it if you can answer the following questions as part of my Doctoral Dissertation. This survey aims to investigate the relationship between Social Interest and Mental Health in Lebanon.

The information you provide will be used to enhance and improve our understanding of the relationships between Social Interest and Mental Health in light of demographic differences. Completing the survey will take 15 minutes of your time.

By continuing with the survey, you agree with the following statements:

1. I have been given sufficient information about this research project.
2. I understand that my answers will not be released to anyone and my identity will remain anonymous. My name will not be written on the questionnaire nor be kept in any other records.
3. I understand that all responses I provide for this study will remain confidential. When the results of the study are reported, I will not be identified by name or any other information that could be used to infer my identity. Only researchers will have access to view any data collected during this research however data cannot be linked to me.
4. I understand that I may withdraw from this research any time I wish and that I have the right to skip any question I don't want to answer.
5. I understand that my refusal to participate will not result in any penalty or loss of benefits to which I otherwise am entitled to.
6. I have been informed that the research abides by all commonly acknowledged ethical codes.
7. I understand that if I have any additional questions, I can ask the research team listed below.
8. I have read and understood all statements on this form.
9. I voluntarily agree to take part in this research project by answering the research questions.

If you have any questions, you may contact:

Name (PI)	Phone number	Email address
Ara Kavlakian	+9613625482	Ara.Kavlakian@gmail.com

If you have any questions about your rights as a participant in this study, or you want to talk to someone outside the research, please contact the:

University of Nicosia

Telephone: +35722841500

Supervisor: Dr. Andreas Anastasiou

APPENDIX F

Table 3.1 - Two-Tailed Person Correlations between Social Interest, Anxiety, Depression, Loss of Behavioral/Emotional Control, General Positive Affect, Emotional Ties, Life Satisfaction, Psychological Distress, Psychological Well-Being and Mental Health Index, calculated separately for each of the two sexes.

Sex			Social Interest Scale	Anxiety	Depression	Loss of Behavioral / Emotional Control	General Positive Affect	Emotional Ties	Life Satisfaction	Psychological Distress	Psychological Well-Being	Mental Health Index
Female	Social Interest Scale	Pearson Correlation	1	.063	-.058	.060	-.022	.024	-.057	.053	-.055	-.043
		Sig. (2-tailed)		.509	.540	.527	.813	.802	.547	.580	.565	.649
		N	113	113	113	113	113	113	113	113	113	113
	Anxiety	Pearson Correlation	.063	1	.676**	.724**	-.280**	-.307**	-.397**	.915**	-.498**	-.830**
		Sig. (2-tailed)	.509		.000	.000	.001	.000	.000	.000	.000	.000
		N	113	130	130	130	130	130	130	130	130	130
	Depression	Pearson Correlation	-.058	.676**	1	.614**	-.274**	-.339**	-.400**	.738**	-.471**	-.732**
		Sig. (2-tailed)	.540	.000		.000	.002	.000	.000	.000	.000	.000
		N	113	130	131	131	131	131	131	130	131	130
	Loss of Behavioral / Emotional Control	Pearson Correlation	.060	.724**	.614**	1	-.359**	-.517**	-.586**	.900**	-.703**	-.851**
		Sig. (2-tailed)	.527	.000	.000		.000	.000	.000	.000	.000	.000
		N	113	130	131	131	131	131	131	130	131	130
	General Positive Affect	Pearson Correlation	-.022	-.280**	-.274**	-.359**	1	.262**	.609**	-.444**	.819**	.619**
		Sig. (2-tailed)	.813	.001	.002	.000		.003	.000	.000	.000	.000
		N	113	130	131	131	131	131	131	130	131	130
	Emotional Ties	Pearson Correlation	.024	-.307**	-.339**	-.517**	.262**	1	.378**	-.458**	.633**	.523**
		Sig. (2-tailed)	.802	.000	.000	.000	.003		.000	.000	.000	.000

		N	113	130	131	131	131	131	131	130	131	130
	Life Satisfaction	Pearson Correlation	-.057	-.397**	-.400**	-.586**	.609**	.378**	1	-.577**	.750**	.654**
		Sig. (2-tailed)	.547	.000	.000	.000	.000	.000		.000	.000	.000
		N	113	130	131	131	131	131	131	130	131	130
	Psychological Distress	Pearson Correlation	.053	.915**	.738**	.900**	-.444**	-.458**	-.577**	1	-.695**	-.938**
		Sig. (2-tailed)	.580	.000	.000	.000	.000	.000	.000		.000	.000
		N	113	130	130	130	130	130	130	130	130	130
	Psychological Well-Being	Pearson Correlation	-.055	-.498**	-.471**	-.703**	.819**	.633**	.750**	-.695**	1	.847**
		Sig. (2-tailed)	.565	.000	.000	.000	.000	.000	.000	.000		.000
		N	113	130	131	131	131	131	131	130	131	130
	Mental Health Index	Pearson Correlation	-.043	-.830**	-.732**	-.851**	.619**	.523**	.654**	-.938**	.847**	1
		Sig. (2-tailed)	.649	.000	.000	.000	.000	.000	.000	.000	.000	
		N	113	130	130	130	130	130	130	130	130	130
Male	Social Interest Scale	Pearson Correlation	1	-.054	-.100	-.010	.047	.019	.034	-.010	.128	.113
		Sig. (2-tailed)		.724	.512	.951	.758	.902	.826	.949	.404	.460
		N	45	45	45	45	45	45	45	45	45	45
	Anxiety	Pearson Correlation	-.054	1	.633**	.662**	-.021	-.140	-.302*	.916**	-.346**	-.805**
		Sig. (2-tailed)	.724		.000	.000	.869	.279	.017	.000	.006	.000
		N	45	62	62	62	62	62	62	62	62	62
	Depression	Pearson Correlation	-.100	.633**	1	.634**	-.290*	-.284*	-.400**	.752**	-.513**	-.794**
		Sig. (2-tailed)	.512	.000		.000	.022	.025	.001	.000	.000	.000
		N	45	62	62	62	62	62	62	62	62	62

Loss of Behavioral / Emotional Control	Pearson Correlation	-.010	.662**	.634**	1	-.068	-.239	-.492**	.827**	-.493**	-.747**
	Sig. (2-tailed)	.951	.000	.000		.601	.062	.000	.000	.000	.000
	N	45	62	62	62	62	62	62	62	62	62
General Positive Affect	Pearson Correlation	.047	-.021	-.290*	-.068	1	.233	.492**	-.205	.806**	.476**
	Sig. (2-tailed)	.758	.869	.022	.601		.069	.000	.109	.000	.000
	N	45	62	62	62	62	62	62	62	62	62
Emotional Ties	Pearson Correlation	.019	-.140	-.284*	-.239	.233	1	.148	-.260*	.519**	.381**
	Sig. (2-tailed)	.902	.279	.025	.062	.069		.250	.041	.000	.002
	N	45	62	62	62	62	62	62	62	62	62
Life Satisfaction	Pearson Correlation	.034	-.302*	-.400**	-.492**	.492**	.148	1	-.495**	.699**	.611**
	Sig. (2-tailed)	.826	.017	.001	.000	.000	.250		.000	.000	.000
	N	45	62	62	62	62	62	62	62	62	62
Psychological Distress	Pearson Correlation	-.010	.916**	.752**	.827**	-.205	-.260*	-.495**	1	-.558**	-.915**
	Sig. (2-tailed)	.949	.000	.000	.000	.109	.041	.000		.000	.000
	N	45	62	62	62	62	62	62	62	62	62
Psychological Well-Being	Pearson Correlation	.128	-.346**	-.513**	-.493**	.806**	.519**	.699**	-.558**	1	.780**
	Sig. (2-tailed)	.404	.006	.000	.000	.000	.000	.000	.000		.000
	N	45	62	62	62	62	62	62	62	62	62
Mental Health Index	Pearson Correlation	.113	-.805**	-.794**	-.747**	.476**	.381**	.611**	-.915**	.780**	1
	Sig. (2-tailed)	.460	.000	.000	.000	.000	.002	.000	.000	.000	
	N	45	62	62	62	62	62	62	62	62	62

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

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

APPENDIX G

Table 5.1 - Two-Tailed Person Correlations between Social Interest, Anxiety, Depression, Loss of Behavioral/Emotional Control, General Positive Affect, Emotional Ties, Life Satisfaction, Psychological Distress, Psychological Well-Being and Mental Health Index, for participants who graduated from a public high school.

Formal School Type			Social Interest Scale	Anxiety	Depression	Loss of Behavioral / Emotional Control	General Positive Affect	Emotional Ties	Life Satisfaction	Psychological Distress	Psychological Well-Being	Mental Health Index
Public	Social Interest Scale	Pearson Correlation	1	.354	.188	.330	-.135	-.066	-.132	.358	-.303	-.427
		Sig. (2-tailed)		.179	.485	.213	.619	.807	.627	.173	.254	.099
		N	16	16	16	16	16	16	16	16	16	16
	Anxiety	Pearson Correlation	.354	1	.604**	.884**	.057	-.360	-.356	.955**	-.406	-.864**
		Sig. (2-tailed)	.179		.003	.000	.799	.100	.104	.000	.061	.000
		N	16	22	22	22	22	22	22	22	22	22
	Depression	Pearson Correlation	.188	.604**	1	.680**	-.414	-.489*	-.402	.672**	-.624**	-.764**
		Sig. (2-tailed)	.485	.003		.000	.055	.021	.063	.001	.002	.000
		N	16	22	22	22	22	22	22	22	22	22
	Loss of Behavioral / Emotional Control	Pearson Correlation	.330	.884**	.680**	1	-.082	-.504*	-.389	.946**	-.515*	-.874**
		Sig. (2-tailed)	.213	.000	.000		.715	.017	.074	.000	.014	.000
		N	16	22	22	22	22	22	22	22	22	22
	General Positive Affect	Pearson Correlation	-.135	.057	-.414	-.082	1	.422	.476*	-.143	.811**	.369
		Sig. (2-tailed)	.619	.799	.055	.715		.051	.025	.527	.000	.091
		N	16	22	22	22	22	22	22	22	22	22
	Emotional Ties	Pearson Correlation	-.066	-.360	-.489*	-.504*	.422	1	.524*	-.491*	.724**	.624**
		Sig. (2-tailed)	.807	.100	.021	.017	.051		.012	.020	.000	.002
		N	16	22	22	22	22	22	22	22	22	22
	Life Satisfaction	Pearson Correlation	-.132	-.356	-.402	-.389	.476*	.524*	1	-.490*	.727**	.614**
		Sig. (2-tailed)	.627	.104	.063	.074	.025	.012		.021	.000	.002

	N	16	22	22	22	22	22	22	22	22	22
Psychological Distress	Pearson Correlation	.358	.955**	.672**	.946**	-.143	-.491*	-.490*	1	-.574**	-.931**
	Sig. (2-tailed)	.173	.000	.001	.000	.527	.020	.021		.005	.000
	N	16	22	22	22	22	22	22	22	22	22
Psychological Well-Being	Pearson Correlation	-.303	-.406	-.624**	-.515*	.811**	.724**	.727**	-.574**	1	.784**
	Sig. (2-tailed)	.254	.061	.002	.014	.000	.000	.000	.005		.000
	N	16	22	22	22	22	22	22	22	22	22
Mental Health Index	Pearson Correlation	-.427	-.864**	-.764**	-.874**	.369	.624**	.614**	-.931**	.784**	1
	Sig. (2-tailed)	.099	.000	.000	.000	.091	.002	.002	.000	.000	
	N	16	22	22	22	22	22	22	22	22	22

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

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

APPENDIX H

Table 6.1 – Two-Tailed Pearson Correlation between participants' religious preferences, and their levels of Social Interest, Psychological Well-Being, Psychological Distress, and overall levels of Mental Health.

Religion			Social Interest Scale	Psychological Distress	Psychological Well-Being	Mental Health Index
I am not a religious person	Social Interest Scale	Pearson Correlation	1	-.020	.205	.074
		Sig. (2-tailed)		.945	.483	.802
		N	14	14	14	14
	Psychological Distress	Pearson Correlation	-.020	1	-.875**	-.974**
		Sig. (2-tailed)	.945		.000	.000
		N	14	19	19	19
	Psychological Well-Being	Pearson Correlation	.205	-.875**	1	.946**
		Sig. (2-tailed)	.483	.000		.000
		N	14	19	19	19
	Mental Health Index	Pearson Correlation	.074	-.974**	.946**	1
		Sig. (2-tailed)	.802	.000	.000	
		N	14	19	19	19
Christian	Social Interest Scale	Pearson Correlation	1	.351	-.137	-.315
		Sig. (2-tailed)		.167	.600	.219
		N	17	17	17	17
	Psychological Distress	Pearson Correlation	.351	1	-.327	-.853**
		Sig. (2-tailed)	.167		.148	.000
		N	17	21	21	21
	Psychological Well-Being	Pearson Correlation	-.137	-.327	1	.731**
		Sig. (2-tailed)	.600	.148		.000
		N	17	21	21	21
	Mental Health Index	Pearson Correlation	-.315	-.853**	.731**	1
		Sig. (2-tailed)	.219	.000	.000	
		N	17	21	21	21
Muslim	Social Interest Scale	Pearson Correlation	1	.008	-.026	.020
		Sig. (2-tailed)		.936	.797	.842
		N	100	100	100	100
	Psychological Distress	Pearson Correlation	.008	1	-.649**	-.924**
		Sig. (2-tailed)	.936		.000	.000
		N	100	120	120	120
	Psychological Well-Being	Pearson Correlation	-.026	-.649**	1	.819**
		Sig. (2-tailed)	.797	.000		.000
		N	100	120	121	120
	Mental Health Index	Pearson Correlation	.020	-.924**	.819**	1
		Sig. (2-tailed)	.842	.000	.000	
		N	100	120	120	120
Other Religions	Social Interest Scale	Pearson Correlation	1	.020	-.065	-.011
		Sig. (2-tailed)		.919	.749	.958
		N	27	27	27	27

Psychological Distress	Pearson Correlation	.020	1	-.760**	-.964**
	Sig. (2-tailed)	.919		.000	.000
	N	27	32	32	32
Psychological Well-Being	Pearson Correlation	-.065	-.760**	1	.853**
	Sig. (2-tailed)	.749	.000		.000
	N	27	32	32	32
Mental Health Index	Pearson Correlation	-.011	-.964**	.853**	1
	Sig. (2-tailed)	.958	.000	.000	
	N	27	32	32	32

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

Table 6.2 – Two-Tailed Pearson Correlation between participants' levels of Social Interest, Psychological Well-Being, Psychological Distress, and overall levels of Mental Health, and whether or not they lived the majority of their lives in Lebanon.

Where a participant has lived the majority of their life			Social Interest Scale	Psychological Distress	Psychological Well-Being	Mental Health Index
Lebanon	Social Interest Scale	Pearson Correlation	1	.104	-.038	-.048
		Sig. (2-tailed)		.242	.670	.591
		N	128	128	128	128
	Psychological Distress	Pearson Correlation	.104	1	-.700**	-.935**
		Sig. (2-tailed)	.242		.000	.000
		N	128	154	154	154
	Psychological Well-Being	Pearson Correlation	-.038	-.700**	1	.845**
		Sig. (2-tailed)	.670	.000		.000
		N	128	154	155	154
	Mental Health Index	Pearson Correlation	-.048	-.935**	.845**	1
		Sig. (2-tailed)	.591	.000	.000	
		N	128	154	154	154
Outside Lebanon	Social Interest Scale	Pearson Correlation	1	-.225	.075	.171
		Sig. (2-tailed)		.232	.694	.366
		N	30	30	30	30
	Psychological Distress	Pearson Correlation	-.225	1	-.500**	-.913**
		Sig. (2-tailed)	.232		.001	.000
		N	30	38	38	38
	Psychological Well-Being	Pearson Correlation	.075	-.500**	1	.765**
		Sig. (2-tailed)	.694	.001		.000
		N	30	38	38	38
	Mental Health Index	Pearson Correlation	.171	-.913**	.765**	1
		Sig. (2-tailed)	.366	.000	.000	
		N	30	38	38	38

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

Table 6.3 – Two-Tailed Pearson Correlation between participants' levels of Social Interest, Psychological Well-Being, Psychological Distress, and overall levels of Mental Health, and whether or not they are from the capital city of Beirut or from another governorate in Lebanon.

Region			Social Interest Scale	Psychological Distress	Psychological Well-Being	Mental Health Index
Beirut	Social Interest Scale	Pearson Correlation	1	.022	.028	.036
		Sig. (2-tailed)		.851	.808	.760
		N	76	76	76	76
	Psychological Distress	Pearson Correlation	.022	1	-.591**	-.922**
		Sig. (2-tailed)	.851		.000	.000
		N	76	86	86	86
	Psychological Well-Being	Pearson Correlation	.028	-.591**	1	.800**
		Sig. (2-tailed)	.808	.000		.000
		N	76	86	87	86
	Mental Health Index	Pearson Correlation	.036	-.922**	.800**	1
		Sig. (2-tailed)	.760	.000	.000	
		N	76	86	86	86
All Others	Social Interest Scale	Pearson Correlation	1	.034	-.029	-.022
		Sig. (2-tailed)		.763	.793	.841
		N	82	82	82	82
	Psychological Distress	Pearson Correlation	.034	1	-.720**	-.938**
		Sig. (2-tailed)	.763		.000	.000
		N	82	106	106	106
	Psychological Well-Being	Pearson Correlation	-.029	-.720**	1	.857**
		Sig. (2-tailed)	.793	.000		.000
		N	82	106	106	106
	Mental Health Index	Pearson Correlation	-.022	-.938**	.857**	1
		Sig. (2-tailed)	.841	.000	.000	
		N	82	106	106	106

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

APPENDIX I

Distribution of Data

Shapiro-Wilk Tests of data distribution for the Social Interest Scale In total population

		Shapiro-Wilk	
	Statistic	df	Sig.
Social Interest Scale	.983	158	.046
Mental Health Index	.994	192	.568

APPENDIX J

Mean for Social Interest Based on Preferred Language

Means for Participants' scores on the Social Interest Scale when divided by Preferred Language, excluding data from people with all other preferred languages.

Participant's Preferred Language		N	Minimum	Maximum	Mean	Std. Deviation
English	Social Interest Scale	72	1	15	8.25	2.782
Arabic	Social Interest Scale	67	2	14	8.33	2.483