The Relationship Between Stress and Life Satisfaction Among Occupational Therapy Graduate Students

A Project Presented to

the Faculty of the Department of Occupational Therapy

San Jose State University

in Partial Fulfillment

of the Requirements for the Degree

Master of Science

Lee Sonko

May 2016

APPROVED FOR THE DEPARTMENT OF OCCUPATIONAL THERAPY

_____

Megan Chang, PhD, OTR/L

Acknowledgements

Firstly, I must thank my loving wife, Dr. Megan Flom for helping to make this grand project a reality. She has been there, supporting me from the beginning to the end. Great thanks also go to my brother-in-law Walt Flom for sharing his passion and helping me to appreciate and understand it.

I offer my gratitude to my research professor, Dr. Megan Chang for guiding and supporting this effort. I am also grateful for every professor and every student I have encountered at San Jose State. This has been a period of great growth.

I offer grateful thanks to my parents, Lee J. Sonko and Marlene M. Sonko for a lifetime of continued love and encouragement to follow my passions.

The person I need to thank the most can't read this note... yet. I must thank my wonderful daughter Abigail for helping me every morning by reminding me of the joys of life and learning. As she says so excitedly, "Book-a-book-a-book-a-book-a-book!"

Lee Sonko

May 2016

Abstract

Since 2007, the number of occupational therapy (OT) graduate students in the US has increased by more than 31%, and the number of practicing OTs has increased more than 17%. These data suggest that occupational therapy is a fast growing field of study and practice.

This survey study explored the stress and life satisfaction of 72 OT master's students from a university in northern California by having them complete two measures, the *Stress Profile*^{TM} and the *Satisfaction with Life Scale*.

On the *Stress Profile*^{TM}, most students reported average levels of stress on all but one of the stress factors. They did report high levels of Social Support Network. On the *Satisfaction with Life Scale*, students reported high overall life satisfaction. Male students reported lower stress than female students. Students that lived with their parents reported lower stress and less use of alcohol, recreational drugs and cigarettes. Six of the fifteen stress factors were found to be highly correlated ($p < .01$) with life satisfaction: Health Habits, Exercise, Eating/Nutrition, Cognitive Hardiness, Negative Appraisal, and Psychological Well-Being. Another three stress factors were found to be moderately correlated ($p < .05$): Stress, Social Support Network, and Positive Appraisal. These study results can improve the understanding of factors affecting OT graduate students and assist in creating better graduate programs.

Table of Contents

Chapter 1: Introduction

Statement of the Problem

Occupational Therapy graduate students occupy a unique position in education. Medical and nursing school students are well studied as a group, each of those fields having roughly an order of magnitude more practitioners than occupational therapy (United States Department of Labor, 2016) and those professions have existed for far longer. Occupational therapy is a quickly growing field; the number of OTs employed in the US increased 17% from 91,900 in 2007 (United States Department of Labor, 2008) to 110,500 in 2014 (United States Department of Labor, 2015). It has only been since 2007 that the Accreditation Council for Occupational Therapy Education (ACOTE) has required that entry level occupational therapists have at least a master's degree to begin practice. The number of accredited OT master's programs in the United States has increased 13% from 156 in 2008 (American Occupational Therapy Association [AOTA], 2009) to 179 in 2013 (AOTA, 2014). The number of students enrolled in OT master's programs has increased 31% from 11,970 in 2007 to 17,342 in 2013 (AOTA, 2014). The theoretical foundations and scope of practice of occupational therapy has grown significantly in the last 20 years (Glover, 2009), leading to an increase in the subject matter taught in programs. It is not well understood what stressors are most relevant to OT students or how stress affects their life satisfaction. This gap in our knowledge may hinder the ability of support systems to manage stress and maintain life satisfaction for occupational therapy students.

Purpose of the Study

The purpose of the study is to examine the relationship between stress and life satisfaction among occupational therapy graduate students.

Research Questions

How stressed are OT students at SJSU?

How satisfied with life are these students?

How does their stress correlate with life satisfaction?

Definitions

Subjective Well-Being: Diener, Lucas, & Oshi (2002) note that subjective well-being refers to how people experience the quality of their lives. They write that it can be divided into two main aspects: affective and cognitive, that the affective portion refers to how well a person feels their life is going, connecting with their emotions and feelings. They continue that the cognitive portion refers to how well a person thinks their life is going and that this can also be referred to as "life satisfaction" (p. 63). Pavot & Diener (1993) note that these two aspects are moderately correlated.

Life Satisfaction: According to Shin and Johnson (1978), life satisfaction is “a global assessment of a person’s quality of life according to his chosen criteria” (p. 478). According to Diener, Emmons, Larsen, & Griffin (1985), “Judgements of satisfaction are dependent upon a comparison of one’s circumstances with what is thought to be an appropriate standard.”

Chapter 2: Literature Review

Introduction

Occupational therapy graduate students seeking a master's degree face a number of life stressors that may have a direct impact on their sense of life satisfaction. This research study seeks to explore the relationship between stress and life satisfaction in this specific population of graduate students in an effort to inform the academic community. In this chapter, studies on stress and life satisfaction will be reviewed and discussed. The Ecology of Human Performance theoretical framework will be introduced (Dunn, Brown, & McGuigan, 1994). This framework will serve as the foundation of the research study.

Stress

All organisms experience stress in different forms throughout their lives, and people are no exception. Merriam-Webster's online dictionary (n.d.) defines stress as "a physical, chemical, or emotional factor that causes bodily or mental tension," and this tension results from "factors that tend to alter an existent equilibrium"

According to Lyle H. Miller, PhD, and Alma Dell Smith, PhD (as cited in American Psychological Association, 2016), "acute stress is the most common form of stress". They continue noting that acute stress is short-term and is derived from "demands and pressures of the recent past and anticipated demands and pressures of the near future". These researchers note that the three main emotions related to stress are anger, anxiety, and depression; and, these emotional states can result in a variety of unpleasant physical states, including hypertension (Kulkarni, O'Farrell, Erasi & Kochar, 1998) and headaches (WebMD, 2016).

Graduate School Stressors

Graduate students usually engage in rigorous programs. As the requirements for advanced degrees increase, it may significantly increase their stress levels as shown in some studies (Pedersen, 2012)

They have a complex set of stressors put upon them. Compared to undergraduates, their workload is more demanding and they have less structure to rely upon. Demographically, graduate students tend to be older than undergraduates which can add a new set of stressors: they are more likely to be involved in serious relationships (Kacerguis & Adams, 1980) and more likely to have young children (Deater-Deckard, 2004). They are less likely to have a supervised residence (e.g. living at home or in a dormitory) and less likely to have financial supports for school, according to Dr. Jerald Kay (as cited in Tartakovsky, 2008). Due to these stressors (and more), compared to undergraduates, graduate students have a higher risk of suicide (Silverman & Meyer, 1997), anxiety, and depression (The Graduate Assembly of the University of California, 2014).

The most frequent pressing issues for graduate students are cited as being: managing coursework, the difficulty in managing time, finances, managing research projects, advising difficulties, conflicts with program flexibility, and family issues (Davidson, Allums & Pope, n.d.; American Psychological Association, 2016). In the San Jose State University Occupational Therapy program, students are directed into tracks where they must complete five courses each semester with almost no program flexibility (San Jose State University Department of Occupational Therapy, 2014). Working full- or even part-time is often not an option, which may add directly to their financial burdens. The GPA requirements are strict in order to stay in the program. There is a strong focus on group-work as well as an intense schedule of assignments

and presentations. The effect of these stressors and others that haven't been identified among students are deserving of careful research.

Life Satisfaction

One might believe that life satisfaction and happiness are one and the same. However, according to Positive Psychology (Chompoo, 2015), "happiness is an immediate, in-the-moment experience, whereas life satisfaction is happiness that exists when we think about our lives as a whole, looking at the big picture." This definition of life satisfaction emphasizes a more holistic view of one's life, including cultural, physical, social, and temporal factors when exploring what stressors directly affect a person.

Quality of life is also a measure that is similar but distinct from life satisfaction. Veenhoven (1996) writes that quality of life is concerned with people having what they need to do well for themselves. He continues that a person with a high quality of life may be rich, powerful, and popular but still not enjoy their life, likewise, a poor, powerless and isolated person may feel like their life is on the right track. Studies that purport to measure one or the other of these concepts often either serve a dual purpose or conflate the concepts. For example, the Graduate Student Happiness & Well-Being Report (The Graduate Assembly of the University of California, 2014) used three metrics in their study: demographics, the *Satisfaction with Life Scale* (SWLS), and the *Center for Epidemiologic Studies Depression Scale* (CES-D). Their first major finding on the inside cover of the document described, "Top Predictors of Satisfaction With Life: A common, validated measure of positive function, happiness and well-being..." The two concepts can be difficult to tease apart and often the distinction is not necessarily important, though it is a topic worthy of further investigation.

Life satisfaction is a more internal and stable measure of how well a person is fairing than quality of life, which can be strongly influenced by outside forces; and happiness, which is a more short-term measure. That said, life satisfaction is not purely internal. The OECD Better Life Index (Organisation for Economic Co-operation and Development, 2015), documents how life satisfaction across thirty-four countries varies greatly. The average Greek respondent reported life satisfaction as a 4.8 out of 10, the average Dane 7.5. To account for these differences, there must be outside factors in these countries that alter their responses, factors like national politics or the economy. They also point out that increased education raises life satisfaction: people who have only completed primary education in OECD countries have a life satisfaction level of 5.9, but a tertiary education raises that average to 7.0.

The subjective experiences of stress and life satisfaction can be difficult to measure. One objective but extreme measure is to track suicide rates among students. The Big Ten Student Suicide Study (Silverman & Meyer, 1997) was a large, ten-year longitudinal study (five-year retrospective, five-year prospective) that revealed important suicide rate statistics. By age, the suicide rate among students was highest between 20 and 24 (46.4% of suicides), then between 25 and 29 (23.0% of suicides). Graduate students had the highest rate of suicides (32.2%) among the class year (freshman thru graduate). This study highlights how the stresses of college life tend to reach a peak during graduate school and motivate some students to take extreme and unfortunate actions.

Efforts continue to be made to improve the lives of graduate students by identifying stressors and mitigating them. A report from the University of Northern Colorado (Black, L., Rizzolo, S., Knippenberg, S., 2013) with 788 participants highlighted the stressors that got in the way of improved graduate student experiences at their school. They found that the most

important stressors to reduce were time management, financial support, program flexibility and inadequate advising.

Life Satisfaction in SJSU OT Students

The occupational therapy graduate program at San Jose State and its student population have a very particular profile that is not replicated in other graduate programs. While the program has been approved by the Accreditation Council for Occupational Therapy Education (ACOTE), this program has a unique set of professors, teaching styles, and curriculum. The cultural and ethnic profile of the student population is unique, partially due to the applicant pool and partially due to the student acceptance policy which is not transparent. The cost of attending this state school is lower than private programs, potentially drawing a different kind of applicant. The job outlook for OT graduates in recent years has been excellent (U.S. Bureau of Labor Statistics, 2015), potentially drawing more "job seekers" than people who are called to the profession. The students are overwhelmingly female, which differs significantly from many other graduate school programs.

It is important to consider the culture present in a school as well as the culture of the students in it. Hejri and Sorenson (1992) compared life satisfaction between graduate students from America to graduate students that emigrated from Iran. They discovered that there were differences in the sources of their life satisfaction, that the American students emphasized their personal competence while the Iranians emphasized the availability of their social network.

Highlighting the importance of the format of school programs, in a doctoral thesis comparing graduate students at online programs to those at traditional universities, life satisfaction was shown to be significantly lower among the students in the online programs (Hale, 2013). The study compared *Satisfaction with Life Scale* results between 65 online

graduate students and 85 traditional graduate students at two schools. This difference in life satisfaction suggests that working environment and interactions are important considerations for student well-being.

Paro, et al (2010) studied medical school graduate students and found that they routinely reported significantly lower quality of life and life satisfaction scores during their program; the highest scores were reported in the first year of the program with lower scores reported during all other six years of the program. A cross-sectional survey study of 352 medical students reported significantly lower scores on the mental and physical dimensions of Health Related Quality of Life during years 2-6 of their program compared with the incoming Year one group. And in a six year longitudinal study by Kjeldstadli e al. (2006), life satisfaction among medical graduate students decreased from the first year and stayed lower until the end of graduate school.

The Berkeley Graduate Student Happiness & Well-Being Report (The Graduate Assembly of the University of California, 2014) determined that the top predictors of graduate student satisfaction with life are: living conditions, career prospects, and financial confidence. They also determined that lesbian, gay and bisexual graduate students report lower well-being, as do students of "other" race/ethnicity and older students. Every one of these metrics is important when considering the dynamic SJSU OT student population.

Ecology of Human Performance

Ecology of Human Performance (EHP) will be the lens through which the relationship between stress and life satisfaction among occupational therapy students is explored. To understand the EHP framework and how it relates to this current study, three main topics will be explained: the four main constructs of EHP, client-centered approach, and description of context within the EHP model.

The EHP theory "emphasizes the importance of one's context or environment and how the interaction between person and context (ecology) influence performance outcomes" (Cole & Tufano, 2008, p.122). There are four main constructs that are part of EHP: person, tasks, context, and the interplay among person-tasks-context. For the current study, the participants will be asked to self-evaluate their own levels of stress and life satisfaction. In this way, they will be specifically asked to share information about themselves (person), what they have to do (tasks), and the stressors they are currently experiencing (context). And, as no one lives in a vacuum, something will be learned about the relationship among person, tasks, and context, as the research data is analyzed. In this way, EHP is being used as the lens through which the participants are viewed, the data collected, and the data analyzed.

Another factor of EHP theory is that it is a client-centered approach, meaning that it involves peoples' subjective experiences and perceptions. Although there will likely be common themes regarding person, tasks, and context related to the participant sample, there is reliance on each individual's subjective experiences and feelings in order to assess their perception of their own levels of stress and life satisfaction. The two measures that have been chosen for this study -- the *Stress Profile*^{TM} (Nowack, 1999) and the *Satisfaction with Life Scale* (Diener, Emmons, Larsen, & Griffin, 1985) - are both self-report instruments that allow people to share their feelings and beliefs about stress and life satisfaction. This client-centered focus of EHP is in line with occupational therapy as a practice in that it emphasizes an individual's perception of themselves and their functioning.

The third facet of the EHP framework that applies to the current research study is its explanation of context to include "all cultural, physical, and social environments" (Cole & Tufano, 2008, p.117). During the exploration of what stressors are present for the participants,

stressors will be considered related to culture (i.e., language barriers), physical (i.e., less sleep), and social environments (i.e., more serious personal relationships).

In summary, EHP is a robust theoretical framework to use as a foundation for the exploration of stress and life satisfaction in occupational therapy students. Specifically, life stressors come from the environment (or context) and directly affect the individual (person). Life satisfaction is how the individual (person) feels about him/herself. Lastly, occupational therapy students have many daily activities (tasks) that must be performed well in order to complete the graduate courses and earn a master's degree.

In the Ecology of Human Performance (EHP) framework, the stress experienced by graduate students is part of the context that students apply to their experience. EHP identifies four main contexts: cultural, physical, social, and temporal. Cultural stressors include customs and beliefs that may differ between students and professors, or among students. By being away from home, a student may experience cultural stressors, especially for an international student. Physical stressors include all of the non-human aspects of graduate school, stressors like a long commute, insufficient financial support, or coming down with an illness. Social stressors involve differences in role expectations, one example being differences in the expectations of how members of a group believe they should interact. Temporal stressors are those related to time, deadline pressures, age and seniority differences between students, life cycle differences (e.g. whether this is the student's first career choice or not), whether the student has become a parent, or how chronic disease may influence their life view.

Conclusion

This exploration of research related to stress and life satisfaction yielded a wealth of information. However, no studies were found that directly studied the relationship between stress

and life satisfaction within the unique population of occupational therapy students. According to the US News and World Report, occupational therapy is one of the top 20 Best Healthcare Jobs (U.S. News & World Report, 2016). Money Magazine also reported that occupational therapy is one of the top 12 jobs that will grow by 30% by 2024 (Luckwaldt, J., 2016). As more students enter occupational therapy graduate programs, the need to understand what is causing them stress and causing feelings of dissatisfaction will increase and become of greater importance.

By analyzing the data from the *Stress Profile*^{TM} (Nowack, 1999) and the *Satisfaction with Life Scale* (SWLS) (Diener, Emmons, Larsen, & Griffin, 1985) as provided by the research participants, it is hoped that areas of concern and trends for the population will be identified. These data could eventually lead to the identification of protective and risk factors. Future researchers may be empowered to recommend changes to school programs that will help students manage stress and experience greater life satisfaction. Programs like the Case Western Reserve University Wellness elective have already demonstrated their worth to students (Lee & Graham, 2001) and has been implemented on a larger scale (Case Western Reserve University, 2016). The Discussion chapter looks prospectively to the potential benefits of improved stress and life satisfaction factors among OT students.

Chapter 3: Methodology

Introduction

This is a cross-sectional survey study that utilized convenience sampling. Occupational therapy graduate students at San Jose State University were recruited and asked to complete several questionnaires in person on campus including a demographic questionnaire, the *Stress Profile™* (SP), and the *Satisfaction with Life Scale* (SWLS). The 15 areas of the SP were correlated to the result of the SWLS and the demographic data was compared to both the results of the SP and the SWLS.

Subjects/Participants

Researchers recruited San Jose State University occupational therapy graduate students through flyers, postings to social media, personal contacts, and presentations in student classrooms to invite them to participate.

Setting

Participants were asked to complete a series of questionnaires in a classroom located on the SJSU campus in the Central Classroom Building. There were up to 10 participants in the room with at least two researchers to administer the questionnaires. Participants were encouraged to maintain silence during testing.

Instrumentation

Each participant completed the following three measures for this study: Demographic Questionnaire, *Stress Profile™* (Nowack, 1999), and *Satisfaction with Life Scale* (Diener, Emmons, Larsen, & Griffin, 1985).

Demographic Questionnaire was written by research faculty and students in the SJSU OT Program, unpublished, revised February 2016. The Demographic Questionnaire provided the

following information about participants: gender, date of birth, ethnicity, marital status, whether living with parents, status (year) in the Occupational Therapy program, number of courses currently being taken, current work status and field of work, what stress relief practices are used and for how long they have been used, whether they are taking a mindfulness class and how often they practice, whether exercising regularly and the type of exercise, and whether other recreational activities are engaged in and how often they are participated in.

The *Stress Profile*^{TM}, written by Kenneth M. Nowack, PhD, is a self-report instrument that measures risk factors and protective factors that contribute to stress-related illness (Nowack, 1999). Reporting is divided into seven areas: Stress, Cognitive Hardiness, Health Habits (Exercise, Rest/Sleep, Eating/Nutrition, and Prevention), Social Support, Coping Style (Positive Appraisal, Negative Appraisal, Threat Minimization, and Problem Focus), Psychological Well-Being, and Type A Behavior. Health Habits is not calculated independently but is a summation of all the factors in the cluster.

The factors have meanings as follows:

- Stress is the subjective experience of annoyances and frustrations.
- Health Habits is habitual behavior related to exercise, sleep, eating, and prevention.
- Exercise is the level and frequency of exercise.
- Rest/Sleep is the frequency of rest, sleep, and relaxation.
- Eating/Nutrition is the frequency of eating well-balanced, nourishing meals.
- Prevention is the practice of preventative health and hygiene practices.
- ARC Item Cluster is concerned with alcohol, recreational drugs and cigarettes.

- Social Support Network is the belief that there are people who can be counted on for support.
- Type A Behavior is anger urgency, impatience, achievement orientation, and competitiveness.
    - Cognitive Hardiness has three attributes: first, a view of commitment rather than alienation in work and life; second, a feeling of personal control over one's life; third, a view of life change as a challenge rather than a threat
- Positive Appraisal is the use of supportive, encouraging self-talk when faced with life challenges.
- Negative Appraisal is the use of self-blame, criticism, or catastrophic thinking when faced with life challenges.
- Threat Minimization is the avoidance or using humor when faced with problems.
- Problem Focus is focusing on and developing a plan of action to manage problems.
- Psychological Well-Being is satisfaction, psychological equanimity, and overall happiness with life.

Respondents provided one of five responses -- never, rarely, sometimes, often, always -- on each of 123 statements related to stress. Responses were converted into T-scores, with a mean of 50 and a standard deviation of 10 (average range is 40-60). For most of the items, higher scores represent higher relative immunity to stress-related illness and lower scores suggest a relative vulnerability. For the following items, this relationship is reversed: Stress, ARC Item Cluster, Type A Behavior, and Negative Appraisal.

As reported in Nowack (1999), the *Stress Profile*^{TM} is norm-referenced to "a sample of 1,111 men and women, ages 20-68, from a variety of working environments" (p. 1). Nowack reports that it has a median Cronbach's alpha for internal consistency of 0.72 with a range of 0.51 to 0.91, and it has a median correlation coefficient of 0.79 for test-retest reliability with values ranging from 0.76 to 0.86. According to Nowack, there is moderate test-retest reliability, low to average internal consistency correlations, and a high concurrent validity with the Million Behavioral Health Inventory, the Kobasa Hardiness Scales, and the Health Assessment Audit. According to Nowack it also has substantial predictive validity.

The *Satisfaction with Life Scale* written by Diener, Emmons, Larsen, and Griffin (1985) is a self-report instrument that measures a respondent's life satisfaction. Respondents provide answers to five questions regarding their life satisfaction on a Likert scale -- 7-Strongly agree, 6-Agree, 5-Slightly agree, 4-Neither agree nor disagree, 3-Slightly disagree, 2-Disagree, 1-Strongly disagree. Responses are summed into a cumulative score.

The *Satisfaction with Life Scale* has been normed for many groups of people including American and international college students, doctoral students, healthcare workers, prison inmates, and others (Pavot & Diener, 1993). The SWLS has strong internal reliability with an estimated Cronbach's alpha between .79 and .89 (Pavot & Diener, 1993). It has moderate temporal stability over time which is as expected as individuals' life situations evolve. A score of 20 represents a neutral point on the scale where a respondent is equally satisfied and dissatisfied with life. 30-35 is *highly satisfied,* 25-29 is *satisfied*, 20-24 is *average*, 15-19 is *slightly dissatisfied*, 10-14 is *dissatisfied*, and 5-9 is *extremely dissatisfied* with life (Pavot & Diener, 1993). Scores on the SWLS have a moderate to high correlation with other measures of subjective well-being, and correlate predictably with specific personality characteristics.

Procedures/Methods

Each week for four weeks during March and April 2016, the researchers met participants in Central Classroom Building 222 on the SJSU campus where they explained the purpose of the study and the time commitment for participation. Once verbal assent was obtained, each participant was given a set of questionnaires to complete and a pen. Participants were asked to complete the questionnaires in silence and approach a researcher if they have any questions during test administration.

Data Collection

Paper questionnaires were collected from each participant after completion. Each participant was assigned a random identification number. All test instruments/questionnaires were labeled with the participant's unique identification number. A key of participant names and identification numbers was kept in a locked file. Data from the questionnaires was input into a Qualtrics database by research team members using participants' unique identification number. It was then transferred to the SPSS Statistics software package where data analysis took place.

Data Analysis

Demographic information was analyzed with descriptive measures (mean, standard deviation, counts, frequencies and relative values). To evaluate the correlation between *Stress Profile*^{TM} data and the SWLS, Pearson r correlations were calculated. To evaluate intercorrelations in the *Stress Profile*^{TM}, pairwise intercorrelations were calculated between all of the stress factors. The effect of demographic factors on life satisfaction and stress factors were analyzed using IBM SPSS (version 22.0.0.0) and JMP (version 11.0.0). Significance level was 0.05.

Chapter 4: Results

Descriptive Statistics

Analysis of the collected data yielded the following information for the respondents who participated in the study. Participants in this study included 72 occupational therapy students, 63 of which were females and 9 males. The sample had a mean age of 28.8 years old with a standard deviation of 4.9 years. The sample consisted of 53% White, Non-Hispanic; 33% Asian; 7% Hispanic; 6% multi-ethnic; and 1% other. The sample was 68% unmarried/single, 26% married/living with partner, and 6% other. 72% of the sample was not living with parents, 28% was. 69% of the sample was second year students, 29% first year, and 1% was other. The sample consisted of 89% taking 5 courses, 8% taking 4 courses, 1% taking 3 courses, and 1% taking 6 courses. The current work status of the sample was 0% Full time work outside the home, 10% Part time (>20 hrs.) work outside the home, 46% Part time (<20 hrs.) work outside the home, 10% Flexible schedule (in and outside the home), 74% Full time student, 11% Unemployed, 24% Housework, 11% Care of others, and 1% Other. The stress reducing techniques practiced by the sample was: 58% Yoga, 11% Compassionate Meditation, 35% Meditation (other), 46% Body scan, 32% Sitting practice, 58% Breath awareness, and 64% taking a mindfulness class (see Table 1).

Table 1.

Demographic Information (n=72)

Demographic	Type	Frequency	Percent
Gender	Female	63	87.5

	Male	9	12.5
Age (Years)	Mean		28.8
	Standard Deviation		4.9
Ethnicity	Asian	24	33
	Hispanic	5	7
	White, Non-Hispanic	38	53
	Multi-ethnic	4	6
	Other	1	1
Marital status	Unmarried/ Single	49	68
	Married/ Living with partner	19	26
	Other	4	6
Living with parents	Yes	20	28
	No	52	72
Status in program	First year	21	29
	Second year	50	69
	Other	1	1
Course load	3 Courses	1	1
	4 Courses	6	8
	5 Courses	64	89
	6 Courses	1	1
Current Work	Full time work outside the home	0	0
status	Part time (>20 hrs.) work outside the home	7	10
	Part time (<20 hrs.) work outside the home	33	46
	Flexible schedule (in and outside the home)	7	10
	Full time student	53	74
	Unemployed	8	11
	Housework	17	24
	Care of others	8	11
	Other	1	1
Practice stress	Yoga	42	58
reducing techniques	Compassionate Meditation	8	11

Meditation (other)	25	35
Body scan	33	46
Sitting practice	23	32
Breath awareness	42	58
Taking a mindfulness class	46	64

Stress Profile

Table 2 displays the mean scores and standard deviations for each of the scales on the Stress Profile. Respondents' scores on Social Support was found to be outside of the average range (>60) and warrants mention. The high mean score on the Social Support Network scale suggests that participants were highly satisfied with the quality and quantity of people in their lives who provide emotional and other support.

Table 2.

Stress Profile T-Scores (n=72)

Scale	Mean	Std. Dev.
Stress*	**48.9**	**7.8**
Health Habits	**55.1**	**10.2**
Exercise	55.1	10.0
Rest/Sleep	47.6	9.0
Eating/Nutrition	55.1	10.9
Prevention	56.7	11.2
ARC Item Cluster*	52.8	8.7
Social Support Network	**63.3****	**13.2**
Type A Behavior*	**51.4**	**11.6**
Cognitive Hardiness	**50.1**	**10.5**

Coping Style		
Positive Appraisal	51.7	10.5
Negative Appraisal*	52.3	13.0
Threat Minimization	47.5	11.1
Problem Focus	53.6	12.0
Psychological Well-Being	**53.0**	**8.5**

* = High scores indicate increased health risk. For all other scales, high scores indicate strengths, and low scores indicate decreased health risk.
** = Notable result.
Factors in bold represent major areas while non-bold factors are within a category

Table 3 displays the percentage of participants that were at risk for stress induced illness for each stress factor. High scores (t-score > 60) for these stress factors "suggest a relative vulnerability to stress related illness." (Nowack, 1999, p. 13).

Table 3

Participants at Risk for Stress Related Illness by Stress Factor (n=72)

Scale	Percent
Stress	6
ARC Item Cluster	15
Type A Behavior	17
Negative Appraisal	32

Table 4 displays the percentage of participants who have high scores on individual protective stress factors. High scores (t-score > 60) for these protective factors "suggest a relative invulnerability to stress related illness." (Nowack, 1999, p. 13).

Table 4

Participants with High Stress Protective Factor Scores (n=72)

Scale	Percent
Health Habits	30

Exercise	35
Rest/Sleep	11
Eating/Nutrition	25
Prevention	0
Social Support Network	56
Cognitive Hardiness	18
Positive Appraisal	20
Threat Minimization	7
Problem Focus	33
Psychological Well-Being	17

Table 5 shows the distribution of T-Score results, sorted into standard deviation columns. For example, on the Stress scale, 14% of respondents scored in the 30-39 category, one standard deviation below average.

Table 5.

Score Classifications on the Stress Profile (n=72)

	T-Score (percent)						
Scale	<20	20-29	30-39	40-60	61-70	71-80	>80
Stress*	0	0	14	81	6	0	0
Health Habits	0	0	7	63	24	7	0
Exercise	0	3	1	61	35	0	0
Rest/Sleep	1	1	15	71	11	0	0
Eating/Nutrition	0	3	4	68	17	8	0
Prevention	0	0	13	88	0	0	0
ARC Item Cluster*	0	0	18	67	14	1	0
Social Support Network	0	0	6	38	19	26	11
Type A Behavior*	0	6	3	74	13	4	1

Cognitive Hardiness	1	0	11	72	13	3	0
Coping Style							
Positive Appraisal	0	1	7	72	14	6	0
Negative Appraisal*	0	1	17	50	24	8	0
Threat Minimization	1	4	18	69	4	3	0
Problem Focus	0	1	14	51	25	8	0
Psychological Well-Being	0	0	6	78	14	3	0

* = High scores indicate increased health risk. For all other scales, high scores indicate strengths, and low scores indicate decreased health risk.
Factors in bold represent major areas while non-bold factors are within a category

Satisfaction with Life Scale

The *Satisfaction with Life Scale* consists of five test items and yields a single score. The mean score for the participants in this study was 27.8 (SD=5.3). According to the test manual, this mean score is high, meaning that the participants are happy with the major parts of life, including home, family, and work.

Correlations Between Stress Factors and Life Satisfaction

The following Stress Factor scales were found to be highly correlated with Life Satisfaction with significance at 0.01 level: Health Habits (r=.417), Exercise (r=.304), Eating/Nutrition (r=.409), Cognitive Hardiness (r=.486), Negative Appraisal (r=-.386), and Psychological Well-Being (r=.558) (see Table 6).

The following Stress Factor Scales were found to be moderately correlated with Life Satisfaction with significance at 0.05 level: Stress (r=-.273), Social Support Network (r=.268), and Positive Appraisal (r=.271) (see Table 6).

No correlations were found between life satisfaction and the following stress factors: Rest/Sleep, Prevention, ARC Item Cluster, Type A Behavior, Positive Appraisal, Threat Minimization, and Problem Focus (see Table 6).

Table 6.

Correlations Between Stress Factors and Overall Life Satisfaction Score (n=72)

Stress Factor Scale	Pearson r Coefficient	Significance
Stress	-.273*	.020
Health Habits	**.417****	<.001
Exercise	**.304****	.009
Rest/Sleep	.187	.116
Eating/Nutrition	**.409****	<.001
Prevention	.225	.057
ARC Item Cluster	-.032	.788
Social Support Network	.268*	.023
Type A Behavior	-.107	.372
Cognitive Hardiness	**.486****	<.001
Coping Style		
Positive Appraisal	.271*	.021
Negative Appraisal	**-.386****	.001
Threat Minimization	.085	.476

Problem Focus	-.046	.700
Psychological Well-Being	**.558****	<.001

* indicates significance at 0.05 level (2-tailed)
** indicates significance at 0.01 level (2-tailed)
Factors in bold represent major areas while non-bold factors are within a category

Table 7 shows the distribution of *Satisfaction with Life Scale* scores sorted into range categories. It shows that the scores are skewed strongly to the left with 43% of respondents reporting their life satisfaction in the highest range.

Table 7.
Score Classifications on the Satisfaction with Life Scale (n=72)

	SWLS Score (percent)					
Scale	5-9	10-14	15-19	20-24	25-29	30-35
Satisfaction with Life	0	3	6	21	28	43

Figures A4 through Figure A18 display scatter plots of each stress factor vs. Life Satisfaction. These figures provide confirmation that the correlation statistics presented have not been influenced by outliers or discrepancies in their distribution.

Correlations between Stress Factors and Demographics

Statistical analyses were performed (t-test, ANOVA, and linear regression) between the stress factors and demographic data (see Table A8). Each stress factor was compared to the following demographic categories: gender, ethnicity, marital status, living arrangement, year in program, age, and course load. Results showed significant relationships between Stress and gender, ARC Item Cluster and living arrangement, and Stress and living arrangement.

Results showed that men (n=9) had significantly less reported Stress (mean T-Score=40.7, SD=5.89) than women (n=63, mean T-Score=50.0, SD=7.39), t(70)=3.65, p=.001 Figure A1 displays a graphical representation of the data as confirmation that the correlations presented have not been influenced by outliers or discrepancies in their distribution.

Respondents who lived with their parents (n=20) had slightly but significantly lower ARC Item Cluster scores (mean T-Score=48.9, SD = 8.77) than respondents not living with their parents (n=52, mean T-Score=54.2, SD = 8.35), t(70) = 2.39, p = .019 Figure A2 displays a graphical representation of the data as confirmation that the correlations presented have not been influenced by outliers or discrepancies in their distribution.

Respondents who lived with their parents (n=20) had slightly but significantly lower Stress scores (mean T-Score=45.7, SD=7.93) than respondents who did not live with their parents (n=52, mean T-Score=50, SD=7.51) t(70)=2.20, p= .031. Figure A3 displays a graphical representation of the data as confirmation that the correlations presented have not been influenced by outliers or discrepancies in their distribution.

Stress Profile Internal Correlations

Table A5 shows each of the stress factors correlated against all of the other stress factors, sorted by strength of correlation. Table A6 shows a matrix of each stress factor correlated against all of the other stress factors. Table A6 displays the same data as Table A5, formatted differently.

Chapter 5: Discussion

Purpose of Research

The main purpose of conducting this research study was to examine stress levels and life satisfaction among occupational therapy graduate students at San Jose State University (SJSU). Students' responses on the *Stress Profile*^{TM} produced data in seven main areas of stress – Stress, Health Habits, Social Support, Type A Behavior, Cognitive Hardiness, Coping Style, and Psychological Well-Being. Responses on the *Satisfaction with Life Scale* resulted in a single score for each participant. The data from both measures were analyzed to determine overall self-perceived levels of stress and satisfaction. Then, the correlations between individual stress factors and overall life satisfaction were explored. Lastly, the stress factors were compared to one another

The overall reason for examining these phenomena was to improve the current understanding of the factors (stress and life satisfaction) affecting occupational graduate students in an effort to improve graduate programs and student support services.

Research Findings

Stress. The *Stress Profile*^{TM} reveals that, for 14 of the 15 stress factors Occupational Therapy graduate students at San Jose State University have typical stress levels as compared to the norm. The students were found to have high levels of Social Support Network (see Table 2). According to Nowack (1999), this result indicates that the students believe that they have, to a higher level than normal, people in their lives on a regular basis who love and support them

though life's challenges (pp. 15-16). They feel that they have people go out of their way to improve and brighten their daily lives (p. 16). Additionally, they believe that people give them useful advice and relevant assistance that creates a feeling of security and contentment (p. 16).

Table 3 shows that a number of participants are at risk for stress related illness. These risks may be mediated by the protective stress factors experienced by participants, see Table 6. Note that these analyses are only summaries; some participants may, for example experience the risk factors in Table 3 and not the protective factors in Table 4.

The *Stress Profile*^{TM} is not able to track scores accurately outside the range of 20-80. It is possible that this censored data may have affected some aspects of the statistical analyses. For any factor that has data outside this range, the standard deviation presented in Table 2 may actually be smaller than is presented to an unknown degree. The mean for any of these factors with data outside this range may be higher or lower to an unknown degree. More so, if there was a large amount of data outside the range, the sensitivity of the test instrument could be called into question with the given population. Table 5 shows that, except for Social Support Network, the data has very little data outside the 20-80 range. This provides an assurance that the data is generally valid. However, the standard deviation and mean described for Social Support Network in Table 2 may be different than it is presented.

Life Satisfaction. Scores on the *Satisfaction with Life Scale* revealed that OT graduate students at SJSU have a high level of overall life satisfaction (see Table 7). These students have a generally positive appraisal of their lives, while acknowledging some imperfections. Overall, the main factors in life, including family, friendships, work, school, leisure activities, and personal growth, are going well for them. According to a study conducted by Pavot and Diener (1993), college students in the United States achieved a mean score of 24.0 (SD=6.3) on the *Satisfaction*

with Life Scale. This study suggests that SJSU OT students have a much higher level of life satisfaction than the average college student. There are many possible reasons for this result. The norming study was published in 1993, it is possible that supports and services for college students have improved in the intervening years. Our study participants were mostly older (mean age=29 years) female (87%) graduate students in a master's program which is different from the undergraduate populations in the norming study. Perhaps students in our research sample are more satisfied with their lives because of those factors -- age, gender, higher education, and clear career path.

Correlations between Stress Factors and Demographics. Men in the survey reported significantly less amount of stress than women, a difference of nearly one standard deviation. The reasons for this are not apparent. Respondents who lived with their parents reported both lower ARC Item Cluster scores and lower Stress scores. Both of these correlations make sense. Graduate students living with their parents may be under a more watchful eye. As such, these students may be less likely to engage in activities that may draw disapproval from parents like consuming alcohol, recreational drugs, or cigarettes. Students living with their parents may have many aspects of their life managed for them by their parents, decreasing their stress.

An interesting and perhaps counter-intuitive finding that was that there was no significant difference in the life satisfaction levels of first year students compared with second year students (see Table A7). Several students had proposed that their first year was more stressful than their second year in the program.

Correlations between Stress Factors and Life Satisfaction. Data analysis found that nine of the fifteen stress factors in the *Stress Profile*^{TM} were correlated with Life Satisfaction, as measured by the *Satisfaction with Life Scale*.

Health Habits, Exercise, Eating/Nutrition, Cognitive Hardiness, Negative Appraisal, and Psychological Well-Being were the stress factors found to be highly correlated with life satisfaction. Considering the definitions of each stress factor as found in the Stress Profile Manual (Nowack, 1999), several relationships can be inferred. The more healthy habits people have, especially exercising, having positive dietary habits, and eating nutritious food, the more satisfied they are with their lives (p. 15). Considering the definition of Cognitive Hardiness, people who feel involved, committed, and in control of their lives tend to be happier (p. 17). Considering the definition of Negative Appraisal, people who approach life's challenges without a negative attitude, avoiding self-blame and criticism, tend to feel more satisfied about their lives overall (p. 18). Lastly, considering the definition of Psychological Well-Being, those who are comfortable with the major aspects of life (i.e., work, money, family) generally have higher life satisfaction (p. 18).

There were three moderately correlated stress factors of Stress, Social Support Network, and Positive Appraisal. Considering the definitions of each stress factor from the Stress Profile Manual (Nowack, 1999) suggest that people with less subjective experience of annoyances and frustrations in their lives feel more satisfied with life. Considering the definition of Social Support Network, those who believe that their family and friends offer assistance, love, and support feel more satisfied about their lives (pp. 15-17). Furthermore, considering the definition of Positive Appraisal, those see the good in life's difficult moments are also more satisfied with their lives (p. 18).

Stress Profile Internal Correlations.

By looking at the correlations between each stress factor, the relationships can be understood better (see Tables 6 and 7). The summary category Health Habits is highly correlated with the stress factors in the category: Eating/Nutrition (r = .81), Prevention (r = .72), Rest/Sleep (r = .68), and Exercise (r = .50). This makes sense as Nowack (1999) placed all of these stress factors together in one summary category because of their similarities (p. 15).

Cognitive Hardiness and Psychological Well-Being are highly correlated (r=.66).This is a very interesting correlation. These two stress factors are the most highly correlated with Life Satisfaction, r=.49 and r=.56 respectively. It is easy to understand why Psychological Well-Being is highly correlated with Life Satisfaction, they have very similar constructs. Nowack (1999) describes Psychological Well-Being as measuring "the positive affect and absence of distress that are associated with a general feeling of satisfaction with one's family circumstances, social relationships, and accomplishments in life." Pavot and Diener (1993) describe life satisfaction as, "... a cognitive and global evaluation of the quality of one's life as a whole.". Because they measure nearly the same thing, the value of this correlation may be diminished. However, Cognitive Hardiness measures a different concept and it is quite interesting to see that Cognitive Hardiness and Life Satisfaction are so closely correlated.

Consideration of nonsignificant results. This research has mostly focused on finding relationships. But there is some value in considering where no relationships were discovered. In our data set, there was no significant correlation between Life Satisfaction and several stress factors: ARC Item Cluster, Rest/Sleep, Threat Minimization, Problem Focus, and Type A Behavior. It is somewhat surprising that no correlation was found between some of these factors and Life Satisfaction. For example, having a high Rest/Sleep score means that a person is rested

and less fatigued. Finding that improved sleep is not correlated with Life Satisfaction is a surprise. Limitations of the study may have hindered finding a correlation, or there may be an interesting result waiting for us to be discovered. These non-correlations also open windows for future research.

Limitations

Convenience survey studies are problematic because of potential sampling bias. In this study focused on stress, it is possible that the potential respondents' stress would make them less likely to participate in the study. "I'm too stressed to take a stress study!" sounds like an easy refrain.

Out of 136 current OT students at SJSU, just 72 students (or 53%) volunteered to participate in this study. It is not known why the other 47% chose not to participate. Perhaps they were too stressed to take the time for the study. If the sampled population is not representative of the general population, our analysis may be impacted.

The packet for this study contained several surveys. Demographics, *Stress Profile™*, *Adult Manifest Anxiety Scale™ (AMAS™), Center for Epidemiologic Studies Depression Scale Revised (CESD-R), Pittsburgh Sleep Quality Index (PSQI),* and *Engagement in Meaningful Activities Survey (EMAS)*. The order in which these surveys were taken may have had an effect on the scores. For example, a respondent that answered questions about depression may be reminded of unpleasant thoughts and report a lower life satisfaction if those questions are answered next.

Limitations of the *Stress Profile™* include:

- It is a self-report survey.

- Many of the questions rely on subjective evaluations from the respondent like identifying “junk” food or a “nutritious” breakfast.
- Some stress factors were highly intercorrelated which may warrant more in-depth analysis of results.

Limitations of the SWLS include:

- It is a self-report survey.
- The instrument has a limited ability to discriminate between cognitive and affective subjective well-being. This overlap makes the SWLS an imperfect tool for measuring just the one factor.
- SWLS is affected by the mood of the respondent at the time of the test
- The questions do not specify how the life domains of the respondent should be weighed, thus each respondent may find a different importance about similar events like weddings, graduations, or health issues.
- A respondent may assign more or less weight to recent events in their life, changing their answer accordingly.
- A perfect definition of "life satisfaction" does not exist.

An examination of Table 5 and histograms of the data showed nothing unusual or alarming with respect to the validity and consistency of the data.

Implications for Occupational Therapy

Occupational Therapy as a field of practice and study focuses on helping people of all ages perform the daily tasks and activities that they want and need to do. OT students are adults whose lives include, in part, attending classes, studying, eating, sleeping, and maintaining personal relationships. The current study found that Psychological Well-Being, Cognitive

Hardiness, and Eating/Nutrition are the most important factors to target in an effort to improve overall life satisfaction. One might posit that OT students with higher satisfaction would likely be better students, learn more in their OT graduate program, and consequently, end up being better practitioners once they graduate. If this idea proved true, then graduate programs could produce better OTs; and, the public would benefit from better overall care from their OTs.

Two additional areas of positive results found by this research study are the high levels of social support and life satisfaction reported by the participants. When exploring new ways to support OT students and improve their lives while in school, one might tap into their feelings of security and comfort regarding their social network of family, friends, and colleagues. For example, one could aim to improve the students' eating habits by creating a support group of students who meet regularly to learn about nutrition and healthy eating while also feeling supported by their peers. This is just one example of using a population's "strength" (e.g., Social Support Network) to ameliorate their areas of weakness (e.g., Eating/Nutrition).

The second area of positive results is the high level of overall Life Satisfaction, which was found to be even higher than typical college students. Although this is an area of strength for our student population, there is certainly room for improvement. The goal would be for OT students to feel their lives are "enjoyable, and the major domains of life are going well" (Diener, 2006). There are certainly many possible strategies for assisting OT students in improving their feelings of satisfaction, including programs that target the above mentioned factors (e.g., Eating/Nutrition). Again, it should be noted that the ultimate goal for improving the lives of OT students is so that they gain as much knowledge and experience as possible while in school and then grow into the best therapists possible. More highly qualified and happy OT's will hopefully be able to provide better services (occupational therapy) to their clients.

Future Research

There are a number of factors – sample size, sampling method, demographic makeup, etc. – inherent in this research study that create a selection bias, making it challenging to generalize the results. To that end, another research team could design a new study with a larger sample size, using a more representative sampling procedure, and even a different experimental design in an effort to produce more robust results. Using objective measures of stress (e.g. blood pressure, cortisol levels) may improve the usefulness of the study results.

Eating/Nutrition may make an interesting target for manipulation in an experiment to improve life satisfaction. Knowing that this population has a high mean Social Support Network score, we could use that connectedness to start a student group devoted to improving eating habits and nutrition in the OT department. The group might educate students on topics like the Food Pyramid, managing good eating habits while in graduate school, etc. In this experiment, it may be useful to monitor the participants' Cognitive Hardiness; involvement in an organization may boost students' feelings of involvement, commitment, and control of their lives.

Another experiment may look directly at targeting Cognitive Hardiness. There are already programs in the SJSU OT program that may strengthen this stress factor. Any program that fosters engagement, teamwork, personal control over one's life, and viewing changes as challenges rather than threats may boost Cognitive Hardiness and (possibly) Life Satisfaction. Examples include the currently running mentoring program and the Student Occupational Therapy Association (SOTA).

Examining the correlations between the stress factors and demographics, Results showed that men reported significantly less Stress than women, a difference of nearly one standard deviation. This is a sizable difference and worthy of further exploration. Students living with

their parents used alcohol, recreational drugs, and cigarettes at a slightly lower rate and also reported slightly lower stress levels. Both of these results are worthy of future research.

Conclusions

After considering the limitations of this research study, several key findings emerged. Data showed that OT graduate students at SJSU reported above average levels of Social Support Network, as well as high levels of Life Satisfaction. Male students reported less stress than women; and, students who lived with their parents reported lower ARC Item Cluster scores and lower Stress scores. Six stress factors -- Health Habits, Exercise, Eating/Nutrition, Cognitive Hardiness, Negative Appraisal, and Psychological Well-Being -- were found to be highly correlated with life satisfaction. Stress, Social Support Network, and Positive Appraisal were found to be moderately correlated with life satisfaction. Further analysis of the data revealed that ARC Item Cluster, Rest/Sleep, Threat Minimization, Problem Focus, and Type A Behavior were not correlated with life satisfaction.

These results are important for the field of occupational therapy and may be used to target interventions to improve the lives of OT graduate students, to produce more highly trained OT's, and ultimately to provide better care for clients who receive occupational therapy. Further research into the stress and life satisfaction of OT students could expand on the current study results and improve OT graduate programs and support services.

References

American Occupational Therapy Association (2009). Academic programs annual data report academic year 2008-2009. Retrieved from https://www.aota.org/-/media/Corporate/Files/EducationCareers/ Educators /OTEdData/ 2008-2009%20Annual%20Data%20Report.pdf

American Occupational Therapy Association (2014). Academic programs annual data report academic year 2008-2009. Retrieved from http://www.aota.org/-/media/corporate/files/educationcareers/accredit/ 2013-2014-annual-data-report.pdf

American Occupational Therapy Association. (2000). Listing of educational programs in occupational therapy. *The American Journal of Occupational Therapy*, *54*(6), 649–660.

American Occupational Therapy Association. (2015). List of educational programs in occupational therapy. *The American Journal of Occupational Therapy*, *69*(3), 1–15.

American Psychological Association. (2016). Stress: The different kinds of stress. *Psychology Help Center*. Retrieved from http://www.apa.org/helpcenter/stress-kinds.aspx

Black, L., Rizzolo, S. & Knippenberg, S. (2013). Improving the quality of life for graduate students at UNC. Retrieved from http://www.unco.edu/grad/about/pdf/Final%20Report_Improving%20the%20Quality%20of%20Life%20for%20Graduate%20Students%20at%20UNC.pdf

Black, L., Rizzolo, S., Knippenberg, S., (2013). Improving the quality of life for graduate students at UNC. Retrieved from

http://www.unco.edu/grad/about/pdf/Final%20Report_Improving%20the%20Quality%20of%20Life%20for%20Graduate%20Students%20at%20UNC.pdf

Case Western Reserve University (2016). *University Wellness*. Retrieved from https://www.case.edu/wellness/

Chompoo (2015). Life satisfaction and its 7 contributors, *Positive Psychology Program*. Retrieved from https://positivepsychologyprogram.com/life-satisfaction/

Cole, M. B. & Tufano, R. (2008). Applied theories in occupational therapy: A practical approach. Thorofare, NJ: SLACK.

Davidson, T., Allums, A. & Pope, E. (n.d.). Quality of life initiatives on behalf of graduate students at the University of Oklahoma. Retrieved from http://cgsnet.org/ckfinder/userfiles/files/am10_Davidson.pdf

Deater-Deckard, K. (2004). *Parenting stress*. New Haven: Yale University Press.

Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The Satisfaction with Life Scale. *Journal of Personality Assessment, 49*, 71-75.

Diener, E., Oishi, S., & Lucas, R. E. (2002). Subjective well-being: The science of happiness and life satisfaction. In C.R. Snyder & S.J. Lopez (Ed.), The Oxford Handbook of Positive Psychology. Oxford and New York: Oxford University Press.

Dunn, W., Brown, C., McGuigan, A. (1994). The ecology of human performance: A framework for considering the effect of context. *American Journal of Occupational Therapy, 48*, 7. 595-607. doi:10.5014/ajot.48.7.595.

Glover, J. (2009). The literature of occupational science: A systematic, quantitative examination of peer-reviewed publications from 1996–2006. *Journal of Occupational Science*, 16, 92-103.

Hale, J. (2013). *Differences in life satisfaction among graduate students from online and traditional universities* (Doctoral dissertation). Retrieved from Proquest. (3554915)

Hejri, F., & Sorenson, G. (1992). Life satisfaction among Iranian and American graduate students. *Counselling Psychology Quarterly, 5*(3), 291-297. doi:10.1080/09515079208254474

Kacerguis, M., Adams, G. (1980). Erikson stage resolution: The relationship between identity and intimacy. *Journal of Youth and Adolescence,* 9(2)

Kay, J (2008). The state of college mental health. American Psychiatric Association Annual Meeting

Kjeldstadli, K., Tyssen, R., Finset, A., Hem, E., Gude, T., Gronvold, N. T., … Vaglum, P. (2006). Life satisfaction and resilience in medical school -- a six-year longitudinal, nationwide and comparative study. *BMC Medical Education, 6*(1), 1–8. http://doi.org/10.1186/1472-6920-6-48

Kulkarni, S., O'Farrell, I., Erasi, M. & Kochar, M. (1998). Stress and hypertension. *WMJ. 97(11), 34-38.*

Lee, J., & Graham, A. V. (2001). Students' perception of medical school stress and their evaluation of a wellness elective. *Medical Education, 35*(7), 652-659. doi:10.1046/j.1365-2923.2001.00956.x

Luckwaldt, J., (2016) These 12 jobs will grow 30% by 2024, *Time*. Retrieved from http://time.com/money/4169373/fast-growing-jobs-2024/

Magnus, K., Diener, E., Fujita, F., & Pavot, W. (1992). Personality and events: a longitudinal analysis. *Journal of Personality and Social Psychology*.

Nowack, K. (1999). *Stress Profile* [Measurement instrument]. Retrieved from http://www.wpspublish.com/store/p/3006/the-stress-profile

Nowack, K. (1999). *Stress profile manual.* Los Angeles, CA: Western Psychological Services.

Organisation for Economic Co-operation and Development (2015). Life satisfaction. *Better Life Index*. Retrieved from http://www.oecdbetterlifeindex.org/topics/life-satisfaction/

Paro, et al., (2010). Health-related quality of life of medical students. *Medical Education, 44*(3), 227-235. doi:10.1111/j.1365-2923.2009.03587.x

Pavot, W. & Diener, E., (1993). Review of the satisfaction with life scale, *Psychological Assessment* 5(2), 164-172.

Pedersen, D. E. (2012). Stress carry-over and college student health outcomes. *College Student Journal, 46*(3), 620-627.

San Jose State University Department of Occupational Therapy (2014). *Student manual: Entry level master's program*, San Jose, CA: San Jose State University

Shin, D. C., & Johnson, D. M. (1978). Avowed happiness as an overall assessment of the quality of life. *Social Indicators Research, 5*, 475-492.

Silverman, M., & Meyer, P. (1997). The big ten student suicide study: A 10-year study of suicides on midwestern university campuses. *Suicide & Life-Threatening Behavior, 27*(3), 285-303.

Stress. (n.d.). In Merriam-Webster's online dictionary. Retrieved from http://www.merriam-webster.com/dictionary/stress

Tartakovsky, M. (2008). Highlighting mental health in grad students. *Psych Central*. Retrieved from http://psychcentral.com/blog/archives/2008/09/10/highlighting-mental-health-in-grad-students/

The Graduate Assembly of the University of California. (2014). Graduate student happiness & well-being report | 2014. Retrieved from http://ga.berkeley.edu/wellbeingreport

U.S. Bureau of Labor Statistics (2015). Occupational outlook handbook. *Occupational Therapists*. Retrieved from http://www.bls.gov/ooh/healthcare/occupational-therapists.htm

U.S. News & World Report (2016). Best healthcare jobs. *U.S. News & World Report*. Retrieved from http://money.usnews.com/careers/best-jobs/rankings/best-healthcare-jobs?page=2

United States Department of Labor. (2008). Occupational employment and wages, May 2007. *Bureau of Labor Statistics*. Retrieved from http://web.archive.org/web/20080708214947/http://www.bls.gov/oes/current/oes291122.htm

United States Department of Labor. (2015). Occupational employment and wages, May 2014. *Bureau of Labor Statistics.* Retrieved from http://www.bls.gov/oes/current/oes291122.htm

United States Department of Labor. (2016). *Bureau of Labor Statistics*. Retrieved from http://www.bls.gov/

Veenhoven, R., (1996). The study of life satisfaction. In W. Saris (Ed.), A Comparative Study of Satisfaction with Life in Europe, 11-48). Eötvös University Press.

WebMD (2016). Tension headaches, *WebMD*, Retrieved from http://www.webmd.com/migraines-headaches/guide/tension-headaches

Appendix A: Supplementary Tables

Table A1.
Legend for Variable Names

SP_ARC_T	ARC Item Cluster / ARC* T-score
SP_EAT_T	Eating and Nutrition / EAT T-score
SP_HAB_T	Health Habits / HAB T-score
SP_HAR_T	Cognitive Hardiness / HAR T-score
SP_NEG_T	Negative Appraisal / NEG* T-score
SP_POS_T	Positive Appraisal / POS T-score
SP_PRO_T	Problem Focus / PRO T-score
SP_PRV_T	Prevention / PRV T-score
SP_RES_T	Rest and Sleep / RES T-score
SP_SOC_T	Social Support Network / SOC T-score
SP_STR__T	Stress / STR* T-score
SP_THR_T	Threat Minimization / THR T-score
SP_TYP_T	Type A Behavior / TYP* T-score
SP_WEL_T	Psychological Well-Being / WEL T-score
SP_XRC_T	Exercise / XRC T-score

Table A5.
Stress Factor Pairwise Intercorrelation Table

Stress Factor	By Stress Factor	R	Sig.	Correlation Plot
Eating/Nutrition	Health Habits	0.8097	<.0001	
Prevention	Health Habits	0.7169	<.0001	
Rest/Sleep	Health Habits	0.6785	<.0001	
Psychological Well-Being	Cognitive Hardiness	0.6569	<.0001	

Stress Factor	By Stress Factor	R	Sig.	Correlation Plot
Eating/Nutrition	Rest/Sleep	0.4993	<.0001	
Exercise	Health Habits	0.4728	<.0001	
Threat Minimization	Positive Appraisal	0.4434	<.0001	
Positive Appraisal	Cognitive Hardiness	0.4140	0.0003	
Prevention	Eating/Nutrition	0.4093	0.0004	
Psychological Well-Being	Positive Appraisal	0.3976	0.0005	
Negative Appraisal	Type A Behavior	0.3715	0.0013	
Cognitive Hardiness	Health Habits	0.3714	0.0013	
Psychological Well-Being	Health Habits	0.3481	0.0027	
Psychological Well-Being	Social Support Network	0.3322	0.0044	
Psychological Well-Being	Exercise	0.3281	0.0049	
Cognitive Hardiness	Eating/Nutrition	0.3171	0.0066	
Psychological Well-Being	Eating/Nutrition	0.3157	0.0069	
Prevention	Rest/Sleep	0.2997	0.0105	
Cognitive Hardiness	Exercise	0.2959	0.0116	
Psychological Well-Being	Threat Minimization	0.2913	0.0130	
Eating/Nutrition	Exercise	0.2887	0.0139	
Problem Focus	Threat Minimization	0.2811	0.0168	
Threat Minimization	Cognitive Hardiness	0.2763	0.0188	
Cognitive Hardiness	Prevention	0.2716	0.0210	
Problem Focus	Cognitive Hardiness	0.2704	0.0216	
Positive Appraisal	Eating/Nutrition	0.2565	0.0296	
ARC Item Cluster	Exercise	0.2472	0.0363	
Problem Focus	Type A Behavior	0.2191	0.0645	
Problem Focus	Positive Appraisal	0.2153	0.0694	
Social Support Network	Rest/Sleep	0.2097	0.0770	
Positive Appraisal	Health Habits	0.2068	0.0814	
Positive Appraisal	Exercise	0.2048	0.0844	
Cognitive Hardiness	Social Support Network	0.1847	0.1204	
Rest/Sleep	Exercise	0.1695	0.1545	
Negative Appraisal	Stress	0.1593	0.1812	
Psychological Well-Being	Problem Focus	0.1591	0.1820	
Problem Focus	Eating/Nutrition	0.1548	0.1943	
Psychological Well-Being	Prevention	0.1539	0.1968	
Type A Behavior	Stress	0.1522	0.2020	
Problem Focus	Prevention	0.1519	0.2029	
Problem Focus	Health Habits	0.1501	0.2083	
Psychological Well-Being	Rest/Sleep	0.1475	0.2163	
Problem Focus	Social Support Network	0.1331	0.2649	

Stress Factor	By Stress Factor	R	Sig.	Correlation Plot
Social Support Network	Health Habits	0.1269	0.2880	
Threat Minimization	Exercise	0.1170	0.3276	
Social Support Network	Prevention	0.0993	0.4064	
Threat Minimization	Health Habits	0.0921	0.4418	
ARC Item Cluster	Stress	0.0903	0.4506	
Threat Minimization	Eating/Nutrition	0.0879	0.4629	
Problem Focus	Rest/Sleep	0.0818	0.4944	
Positive Appraisal	Prevention	0.0702	0.5577	
Positive Appraisal	Type A Behavior	0.0674	0.5735	
Cognitive Hardiness	Rest/Sleep	0.0519	0.6648	
Threat Minimization	Rest/Sleep	0.0399	0.7392	
ARC Item Cluster	Rest/Sleep	0.0375	0.7548	
Threat Minimization	Prevention	0.0262	0.8269	
Problem Focus	Stress	0.0203	0.8655	
Threat Minimization	ARC Item Cluster	0.0156	0.8966	
Prevention	Exercise	0.0147	0.9023	
Social Support Network	Eating/Nutrition	0.0115	0.9238	
Type A Behavior	Exercise	0.0061	0.9595	
Social Support Network	ARC Item Cluster	0.0009	0.9943	
Positive Appraisal	ARC Item Cluster	-0.0066	0.9559	
Type A Behavior	Prevention	-0.0120	0.9201	
Social Support Network	Exercise	-0.0215	0.8577	
Positive Appraisal	Stress	-0.0256	0.8312	
Type A Behavior	Eating/Nutrition	-0.0316	0.7921	
Positive Appraisal	Social Support Network	-0.0316	0.7921	
Type A Behavior	Health Habits	-0.0403	0.7366	
Psychological Well-Being	ARC Item Cluster	-0.0457	0.7030	
Positive Appraisal	Rest/Sleep	-0.0486	0.6855	
Problem Focus	Negative Appraisal	-0.0495	0.6799	
Type A Behavior	ARC Item Cluster	-0.0547	0.6480	
Type A Behavior	Social Support Network	-0.0619	0.6052	
Cognitive Hardiness	Type A Behavior	-0.0675	0.5733	
Threat Minimization	Stress	-0.0697	0.5607	
Type A Behavior	Rest/Sleep	-0.0735	0.5394	
Negative Appraisal	Social Support Network	-0.0760	0.5255	
Eating/Nutrition	Stress	-0.0948	0.4281	
Problem Focus	Exercise	-0.0960	0.4225	
Threat Minimization	Type A Behavior	-0.1002	0.4023	
Negative Appraisal	ARC Item Cluster	-0.1031	0.3889	

Stress Factor	By Stress Factor	R	Sig.	Correlation Plot
Threat Minimization	Social Support Network	-0.1212	0.3105	
Negative Appraisal	Prevention	-0.1290	0.2802	
Cognitive Hardiness	ARC Item Cluster	-0.1351	0.2577	
Exercise	Stress	-0.1431	0.2305	
Problem Focus	ARC Item Cluster	-0.1577	0.1858	
Psychological Well-Being	Type A Behavior	-0.1605	0.1780	
Negative Appraisal	Exercise	-0.2095	0.0774	
ARC Item Cluster	Health Habits	-0.2156	0.0690	
Rest/Sleep	Stress	-0.2156	0.0689	
ARC Item Cluster	Eating/Nutrition	-0.2384	0.0437	
Negative Appraisal	Positive Appraisal	-0.2611	0.0267	
Negative Appraisal	Rest/Sleep	-0.2965	0.0114	
Negative Appraisal	Eating/Nutrition	-0.2977	0.0111	
Health Habits	Stress	-0.3079	0.0085	
Negative Appraisal	Health Habits	-0.3472	0.0028	
Social Support Network	Stress	-0.3534	0.0023	
Prevention	Stress	-0.3549	0.0022	
Cognitive Hardiness	Stress	-0.3666	0.0015	
Psychological Well-Being	Stress	-0.3828	0.0009	
Threat Minimization	Negative Appraisal	-0.3834	0.0009	
Psychological Well-Being	Negative Appraisal	-0.3951	0.0006	
ARC Item Cluster	Prevention	-0.4589	<.0001	
Negative Appraisal	Cognitive Hardiness	-0.4908	<.0001	

R indicates Pearson r Coefficient. Sig. indicates Significance.

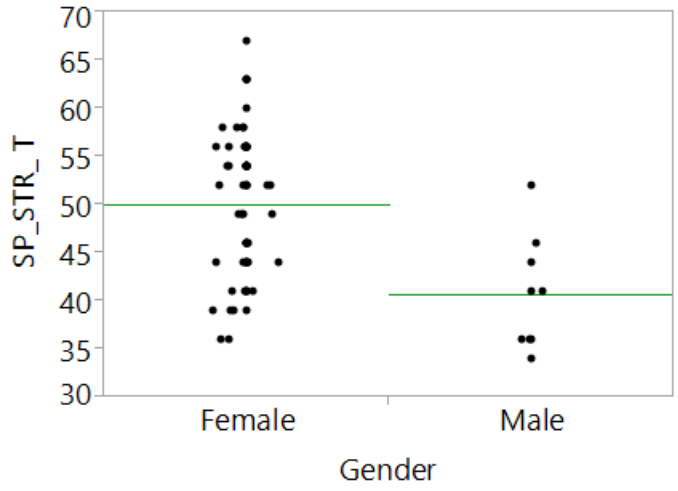
Table A6.

Stress Factor Pairwise Intercorrelation Matrix

	SP_STR_T	SP_HAB_T	SP_XRC_T	SP_RES_T	SP_EAT_T	SP_PRV_T	SP_ARC_T	SP_SOC_T	SP_TYP_T	SP_HAR_T	SP_POS_T	SP_NEG_T	SP_THR T	SP_PRO_T	SP_WEL_T
SP_STR_ T	1.0000	-0.3079	-0.1431	-0.2156	-0.0948	-0.3549	0.0903	-0.3534	0.1522	-0.3666	-0.0256	0.1593	-0.0697	0.0203	-0.3828
SP_HAB_T	-0.3079	1.0000	0.4728	0.6785	0.8097	0.7169	-0.2156	0.1269	-0.0403	0.3714	0.2068	-0.3472	0.0921	0.1501	0.3481
SP_XRC_T	-0.1431	0.4728	1.0000	0.1695	0.2887	0.0147	0.2472	-0.0215	0.0061	0.2959	0.2048	-0.2095	0.1170	-0.0960	0.3281
SP_RES_T	-0.2156	0.6785	0.1695	1.0000	0.4993	0.2997	0.0375	0.2097	-0.0735	0.0519	-0.0486	-0.2965	0.0399	0.0818	0.1475
SP_EAT_T	-0.0948	0.8097	0.2887	0.4993	1.0000	0.4093	-0.2384	0.0115	-0.0316	0.3171	0.2565	-0.2977	0.0879	0.1548	0.3157
SP_PRV_T	-0.3549	0.7169	0.0147	0.2997	0.4093	1.0000	-0.4589	0.0993	-0.0120	0.2716	0.0702	-0.1290	0.0262	0.1519	0.1539
SP_ARC_T	0.0903	-0.2156	0.2472	0.0375	-0.2384	-0.4589	1.0000	0.0009	-0.0547	-0.1351	-0.0066	-0.1031	0.0156	-0.1577	-0.0457
SP_SOC_T	-0.3534	0.1269	-0.0215	0.2097	0.0115	0.0993	0.0009	1.0000	-0.0619	0.1847	-0.0316	-0.0760	-0.1212	0.1331	0.3322
SP_TYP_T	0.1522	-0.0403	0.0061	-0.0735	-0.0316	-0.0120	-0.0547	-0.0619	1.0000	-0.0675	0.0674	0.3715	-0.1002	0.2191	-0.1605
SP_HAR_T	-0.3666	0.3714	0.2959	0.0519	0.3171	0.2716	-0.1351	0.1847	-0.0675	1.0000	0.4140	-0.4908	0.2763	0.2704	0.6569
SP_POS_T	-0.0256	0.2068	0.2048	-0.0486	0.2565	0.0702	-0.0066	-0.0316	0.0674	0.4140	1.0000	-0.2611	0.4434	0.2153	0.3976
SP_NEG_T	0.1593	-0.3472	-0.2095	-0.2965	-0.2977	-0.1290	-0.1031	-0.0760	0.3715	-0.4908	-0.2611	1.0000	-0.3834	-0.0495	-0.3951
SP_THR T	-0.0697	0.0921	0.1170	0.0399	0.0879	0.0262	0.0156	-0.1212	-0.1002	0.2763	0.4434	-0.3834	1.0000	0.2811	0.2913
SP_PRO_T	0.0203	0.1501	-0.0960	0.0818	0.1548	0.1519	-0.1577	0.1331	0.2191	0.2704	0.2153	-0.0495	0.2811	1.0000	0.1591

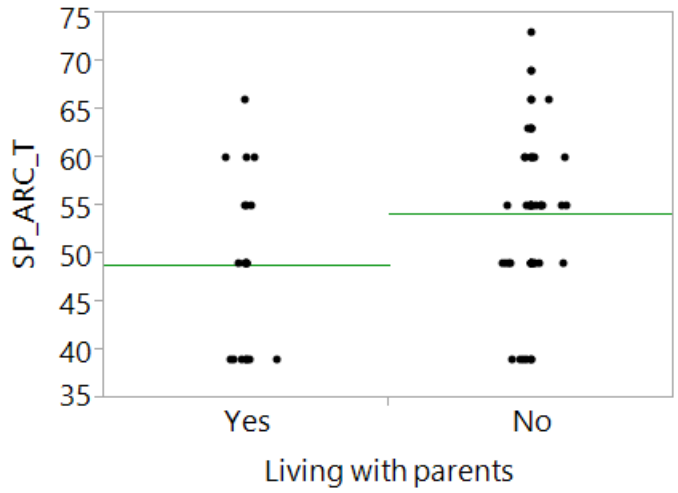
	SP_STR_T	SP_HAB_T	SP_XRC_T	SP_RES_T	SP_EAT_T	SP_PRV_T	SP_ARC_T	SP_SOC_T	SP_TYP_T	SP_HAR_T	SP_POS_T	SP_NEG_T	SP_THR T	SP_PRO_T	SP_WEL_T
SP_WEL_T	-0.3828	0.3481	0.3281	0.1475	0.3157	0.1539	-0.0457	0.3322	-0.1605	0.6569	0.3976	-0.3951	0.2913	0.1591	1.0000

Figure A1.
T-Values of Stress in Males vs. Females



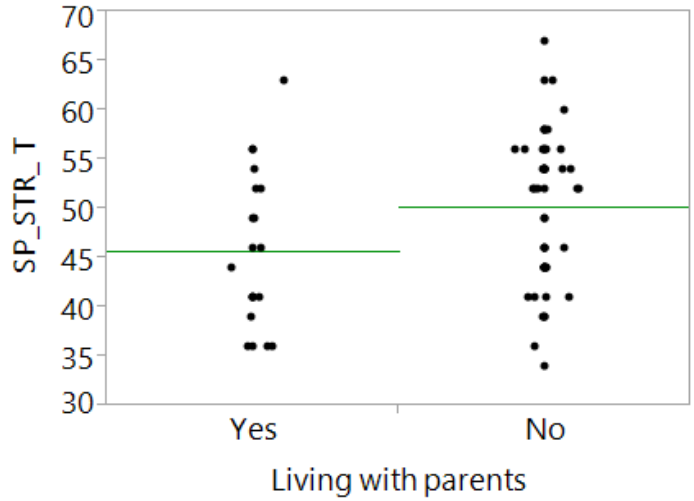
Horizontal bars represent mean values

Figure A2.
T-Values of ARC Item Cluster vs. Living Arrangement



Horizontal bars represent mean values

Figure A3.
T-Values of Stress vs. Living Arrangement



Horizontal bars represent mean values

Table A7.
Analysis of Life Satisfaction vs. Demographics

Demographic	Analysis Method	df	F Ratio	p
Gender	t-test	1	0.2113	0.6472

Ethnicity	ANOVA	4	0.7324	0.5731
Marital status	ANOVA	3	0.4886	0.6913
Living with parents	t-test	1	0.6556	0.4209
Year in the program	ANOVA	2	0.2692	0.7648
Age	Linear Regression	1	0.4944	0.4843
Course load	Linear Regression	1	0.4927	0.4851

Table A8.

Stress Factors vs. Demographic Factors Correlation Matrix

Stress Factor	Demographic	Analysis Method	df	F Ratio	p
SP_ARC_T	Age	Linear Regression	1	0.3429	0.56
SP_ARC_T	Ethnicity	ANOVA	4	0.6369	0.638
SP_ARC_T	Gender	t-test	1	0.005	0.9437
SP_ARC_T	How many courses are you currently taking?	Linear Regression	1	0.2038	0.653
SP_ARC_T	Living with parents	t-test	1	5.7293	0.0194*
SP_ARC_T	Marital status	ANOVA	3	0.2578	0.8555
SP_ARC_T	Status in Occupational Therapy Program (Year)	ANOVA	2	0.9541	0.3902
SP_EAT_T	Age	Linear Regression	1	3.9163	0.0518
SP_EAT_T	Ethnicity	ANOVA	4	1.4507	0.2271
SP_EAT_T	Gender	t-test	1	0.8803	0.3514
SP_EAT_T	How many courses are you currently taking?	Linear Regression	1	0.5224	0.4722
SP_EAT_T	Living with parents	t-test	1	0.0077	0.9303
SP_EAT_T	Marital status	ANOVA	3	1.1287	0.3437
SP_EAT_T	Status in Occupational Therapy Program (Year)	ANOVA	2	0.9489	0.3921
SP_HAB_T	Age	Linear Regression	1	0.0261	0.8722
SP_HAB_T	Ethnicity	ANOVA	4	1.3464	0.262
SP_HAB_T	Gender	t-test	1	0.0957	0.758
SP_HAB_T	How many courses are you currently taking?	Linear Regression	1	0.312	0.5782
SP_HAB_T	Living with parents	t-test	1	0.4139	0.5221
SP_HAB_T	Marital status	ANOVA	3	1.4105	0.2473
SP_HAB_T	Status in Occupational Therapy Program (Year)	ANOVA	2	0.3928	0.6767
SP_HAR_T	Age	Linear Regression	1	0.7195	0.3992
SP_HAR_T	Ethnicity	ANOVA	4	1.7649	0.1462
SP_HAR_T	Gender	t-test	1	0.1582	0.692
SP_HAR_T	How many courses are you currently taking?	Linear Regression	1	0.0216	0.8836

SP_HAR_T	Living with parents	t-test	1	0.7379	0.3933
SP_HAR_T	Marital status	ANOVA	3	0.4494	0.7186
SP_HAR_T	Status in Occupational Therapy Program (Year)	ANOVA	2	1.2645	0.2889
SP_NEG_T	Age	Linear Regression	1	3.5016	0.0655
SP_NEG_T	Ethnicity	ANOVA	4	1.7104	0.158
SP_NEG_T	Gender	t-test	1	1.0131	0.3176
SP_NEG_T	How many courses are you currently taking?	Linear Regression	1	0.1683	0.6829
SP_NEG_T	Living with parents	t-test	1	0.7184	0.3996
SP_NEG_T	Marital status	t-test	1	1.9021	0.1725
SP_NEG_T	Status in Occupational Therapy Program (Year)	ANOVA	2	0.4926	0.6132
SP_POS_T	Age	Linear Regression	1	0.0033	0.9543
SP_POS_T	Ethnicity	ANOVA	4	2.44	0.0553
SP_POS_T	Gender	t-test	1	0.2035	0.6533
SP_POS_T	How many courses are you currently taking?	Linear Regression	1	0.5434	0.4635
SP_POS_T	Living with parents	t-test	1	0	0.9967
SP_POS_T	Marital status	ANOVA	3	0.1103	0.9538
SP_POS_T	Status in Occupational Therapy Program (Year)	ANOVA	2	1.1114	0.3349
SP_PRO_T	Age	Linear Regression	1	0.0347	0.8528
SP_PRO_T	Ethnicity	ANOVA	4	0.4212	0.7928
SP_PRO_T	Gender	t-test	1	0.1474	0.7022
SP_PRO_T	How many courses are you currently taking?	Linear Regression	1	0.1728	0.6789
SP_PRO_T	Living with parents	t-test	1	0.0817	0.7759
SP_PRO_T	Marital status	ANOVA	3	0.7756	0.5116
SP_PRO_T	Status in Occupational Therapy Program (Year)	ANOVA	2	2.1284	0.1268
SP_PRV_T	Age	Linear Regression	1	0.0505	0.8228
SP_PRV_T	Ethnicity	ANOVA	4	0.9284	0.4528
SP_PRV_T	Gender	t-test	1	0.4185	0.5198
SP_PRV_T	How many courses are you currently taking?	Linear Regression	1	0.0925	0.762
SP_PRV_T	Living with parents	t-test	1	0.0064	0.9364
SP_PRV_T	Marital status	ANOVA	3	1.4148	0.246
SP_PRV_T	Status in Occupational Therapy Program (Year)	ANOVA	2	1.7809	0.1761
SP_RES_T	Age	Linear Regression	1	0.4389	0.5098
SP_RES_T	Ethnicity	ANOVA	4	0.6702	0.6149
SP_RES_T	Gender	t-test	1	0.989	0.3234
SP_RES_T	How many courses are you currently taking?	Linear Regression	1	2.9517	0.0902
SP_RES_T	Living with parents	t-test	1	1.8607	0.1769
SP_RES_T	Marital status	ANOVA	3	0.8597	0.4664
SP_RES_T	Status in Occupational Therapy Program (Year)	ANOVA	2	0.5514	0.5787
SP_SOC_T	Age	Linear Regression	1	3.9391	0.0511
SP_SOC_T	Ethnicity	ANOVA	4	0.2397	0.9149
SP_SOC_T	Gender	t-test	1	0.589	0.4454
SP_SOC_T	How many courses are you currently taking?	Linear Regression	1	0.404	0.5271
SP_SOC_T	Living with parents	t-test	1	0.6473	0.4238

SP_SOC_T	Marital status	ANOVA	3	0.2759	0.8426
SP_SOC_T	Status in Occupational Therapy Program (Year)	ANOVA	2	0.8094	0.4493
SP_STR_ T	Age	Linear Regression	1	2.3458	0.1301
SP_STR_ T	Ethnicity	ANOVA	4	1.1256	0.3519
SP_STR_ T	Gender	t-test	1	13.3003	0.0005*
SP_STR_ T	How many courses are you currently taking?	Linear Regression	1	0.0716	0.7898
SP_STR_ T	Living with parents	t-test	1	4.8391	0.0311*
SP_STR_ T	Marital status	ANOVA	3	0.1396	0.936
SP_STR_ T	Status in Occupational Therapy Program (Year)	ANOVA	2	0.0472	0.954
SP_THR T	Age	Linear Regression	1	1.1447	0.2883
SP_THR T	Ethnicity	ANOVA	4	0.5441	0.7039
SP_THR T	Gender	t-test	1	0.0057	0.9398
SP_THR T	How many courses are you currently taking?	Linear Regression	1	2.1311	0.1488
SP_THR T	Living with parents	t-test	1	0.0029	0.9574
SP_THR T	Marital status	ANOVA	3	0.5148	0.6735
SP_THR T	Status in Occupational Therapy Program (Year)	ANOVA	2	0.1302	0.8782
SP_TYP_T	Age	Linear Regression	1	1.7993	0.1841
SP_TYP_T	Ethnicity	ANOVA	4	0.7682	0.5497
SP_TYP_T	Gender	t-test	1	0.0018	0.9667
SP_TYP_T	How many courses are you currently taking?	Linear Regression	1	0.004	0.9497
SP_TYP_T	Living with parents	t-test	1	1.4249	0.2366
SP_TYP_T	Marital status	ANOVA	3	1.1675	0.3286
SP_TYP_T	Status in Occupational Therapy Program (Year)	ANOVA	2	0.2711	0.7634
SP_WEL_T	Age	Linear Regression	1	1.4109	0.2389
SP_WEL_T	Ethnicity	ANOVA	4	1.5697	0.1925
SP_WEL_T	Gender	t-test	1	0.5736	0.4514
SP_WEL_T	How many courses are you currently taking?	Linear Regression	1	0.5274	0.4701
SP_WEL_T	Living with parents	t-test	1	2.0821	0.1535
SP_WEL_T	Marital status	ANOVA	3	0.2494	0.8615
SP_WEL_T	Status in Occupational Therapy Program (Year)	ANOVA	2	0.0489	0.9523
SP_XRC_T	Age	Linear Regression	0	0.6426	0.4255
SP_XRC_T	Ethnicity	ANOVA	4	0.4085	0.8019
SP_XRC_T	Gender	t-test	1	0.0007	0.9789
SP_XRC_T	How many courses are you currently taking?	Linear Regression	0	0.0084	0.9272
SP_XRC_T	Living with parents	t-test	1	0.2157	0.6438
SP_XRC_T	Marital status	ANOVA	3	0.4013	0.7525
SP_XRC_T	Status in Occupational Therapy Program (Year)	ANOVA	2	1.824	0.1691

* indicates significance at 0.05 level (2-tailed)
For t-test analysis method, F ratio = t^2

Figure A4.

Bivariate Fit of Life Satisfaction By SP_STR_ T

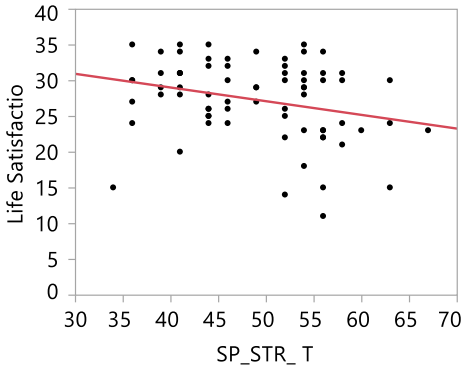


Figure A5.

Bivariate Fit of Life Satisfaction By SP_HAB_T

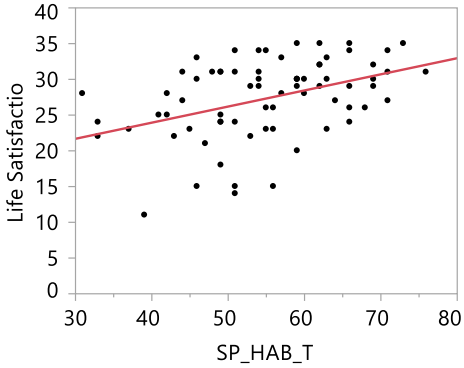


Figure A6.

Bivariate Fit of Life Satisfaction By SP_XRC_T

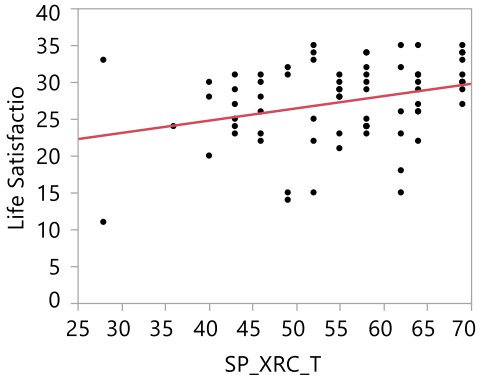


Figure A7.

Bivariate Fit of Life Satisfaction By SP_RES_T

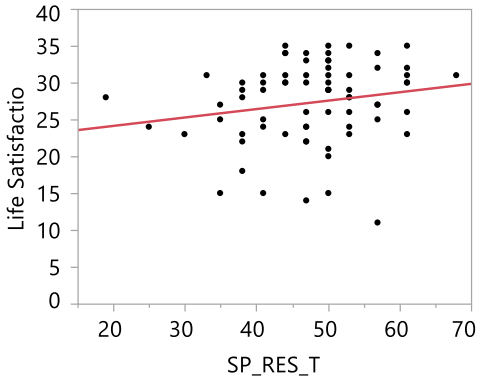


Figure A8.

Bivariate Fit of Life Satisfaction By SP_EAT_T

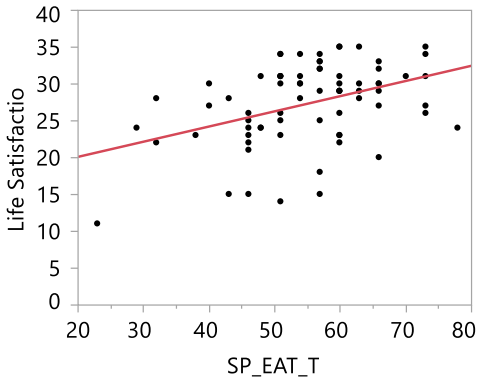


Figure A9.

Bivariate Fit of Life Satisfaction By SP_PRV_T

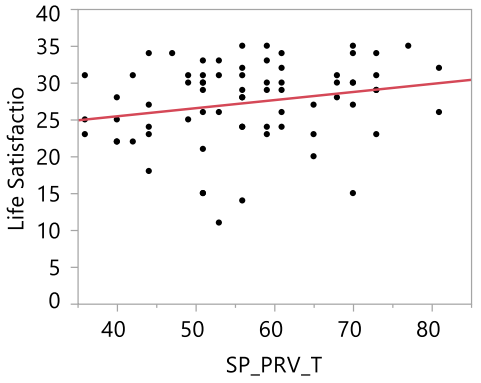


Figure A10.

Bivariate Fit of Life Satisfaction By SP_ARC_T

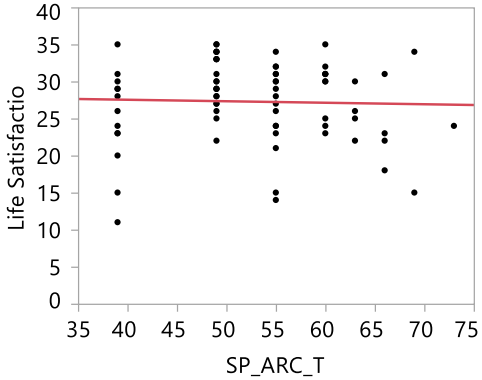


Figure A11.

Bivariate Fit of Life Satisfaction By SP_SOC_T

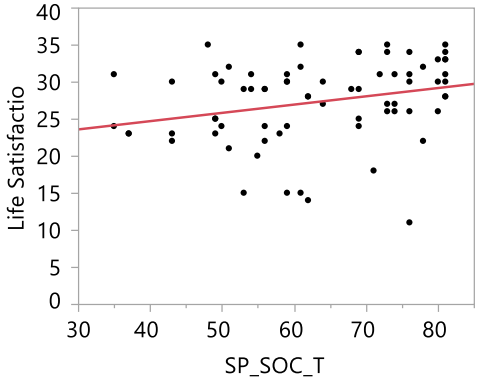


Figure A12.

Bivariate Fit of Life Satisfaction By SP_TYP_T

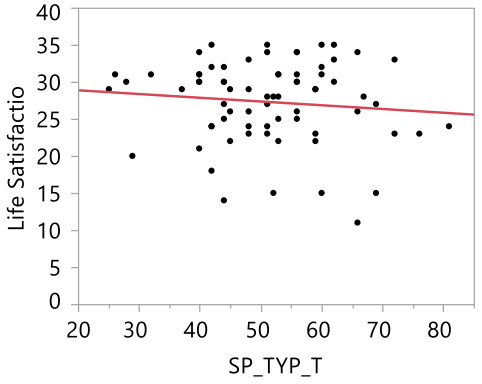


Figure A13.

Bivariate Fit of Life Satisfaction By SP_HAR_T

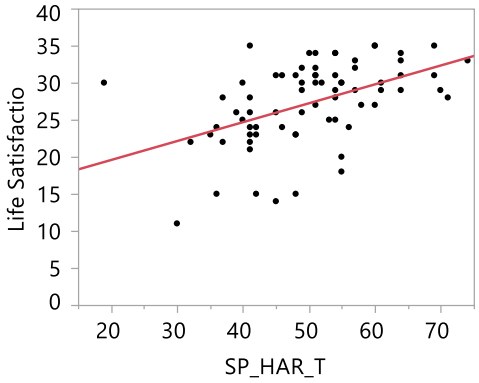


Figure A14.
Bivariate Fit of Life Satisfaction By SP_POS_T

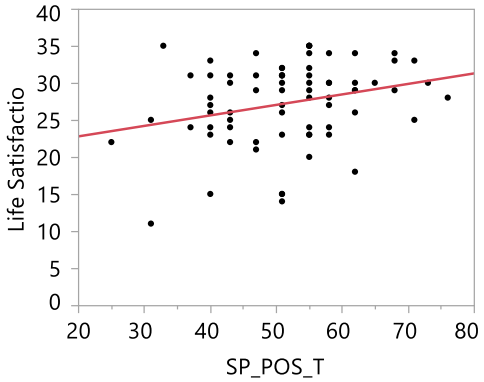


Figure A15.
Bivariate Fit of Life Satisfaction By SP_NEG_T

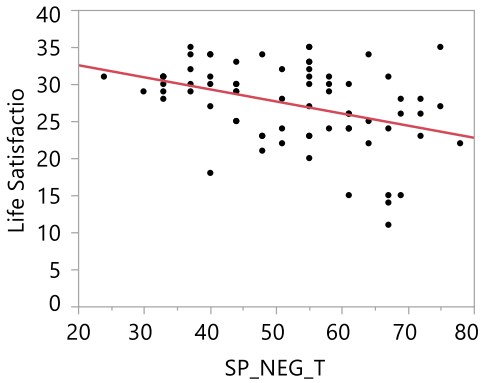


Figure A16.
Bivariate Fit of Life Satisfaction By SP_THR T

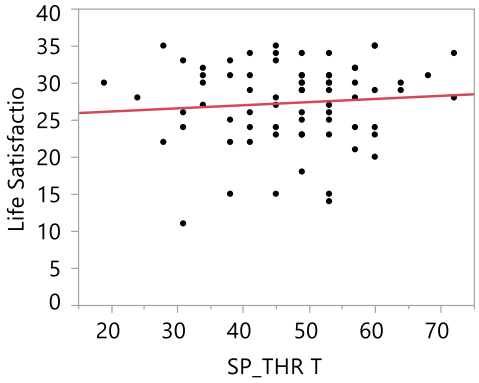


Figure A17.
Bivariate Fit of Life Satisfaction By SP_PRO_T

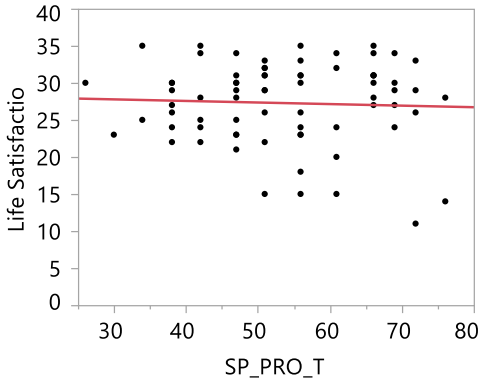
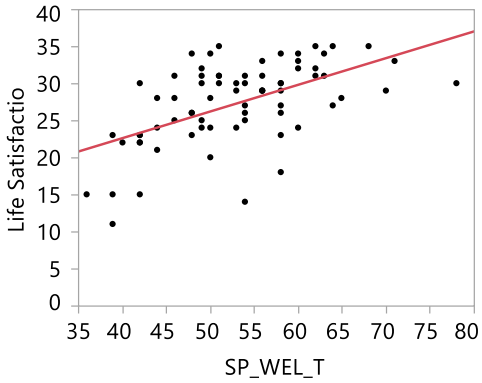


Figure A18.
Bivariate Fit of Life Satisfaction By SP_WEL_T



Appendix B: IRB Approval

SJSU SAN JOSÉ STATE UNIVERSITY | Office of Research Division of Academic Affairs | San José State University One Washington Square San José, CA 95192-0025 | TEL: 408-924-2272 sjsu.edu/research

To: Dr. Megan Chang
Department of Occupational Therapy
San Jose State University
One Washington Square
San Jose, CA 95192-0059

Student Team: Megan Moreno, Jenna Hope, Alrice Lai, Jessica Pham, Kristine Young, Justin Lin, Brian Huyn, Lee Sonko, Inge Verschueren

From: Pamela C. Stacks, Ph.D.
Associate Vice President
Office of Research

Date: February 22, 2016

The Human Subjects-Institutional Review Board has approved your request to use human subjects in the study entitled:

"The Impact of Stress on Occupational Engagement"

This approval is contingent upon the subjects participating in your research project being appropriately protected from risk. This includes the protection of the confidentiality of the subjects' identity when they participate in your research project, and with regard to all data that may be collected from the subjects. The approval includes continued monitoring of your research by the Board to assure that the subjects are being adequately and properly protected from such risks. If at any time a subject becomes injured or complains of injury, you must notify Dr. Pamela Stacks immediately. Injury includes but is not limited to bodily harm, psychological trauma, and release of potentially damaging personal information. This approval for the human subject's portion of your project is in effect for one year, and data collection beyond February 22, 2017 requires an extension request.

Please also be advised that all subjects need to be fully informed and aware that their participation in your research project is voluntary, and that he or she may withdraw from the project at any time. Further, a subject's participation, refusal to participate, or withdrawal will not affect any services that the subject is receiving or will receive at the institution in which the research is being conducted. If you have any questions, please contact me at (408) 924-2479.

Protocol # F16025