HIV and Aging in Los Angeles-The Healthy Living Project

Faculty Mentor: Matt G. Mutchler, Sociology

The advent of effective anti-retroviral therapy (ART) and HIV/AIDS medical treatment has increased the longevity of persons living with HIV/AIDS (PLWHA). However, with an increased life expectancy, older PLWHA experience a variety of new challenges that affect their quality of life. The combination of aging and HIV infection weaken the immune system, increasing health complications for this population. They also face social-psychological challenges related to the aging process such as isolation, and HIV/AIDS and aging-related stigma. The aim of the research project is to explore the needs of gay and aging (50 years of age or older), leaning where and what type of services older adults PLWHA receive in Los Angeles, understanding the barriers and challenges, exploring possible program/strategies that can assist with managing the psychosocial and physical complexities of aging with HIV/AIDS, and identifying service gaps for this population in Los Angeles. To accomplish these aims, a qualitative research project utilizing grounded theory methodology has been conducted with three group focus groups in Los Angeles to explore the needs of MSM who are aging with HIV/AIDS. The results of the study suggest that older PLWHA have very complex dynamic situations regarding the uncertainty about growing older with HIV/AIDS regarding their health, financial situation as they hit retirement, and returning to work. The results also suggest that the programs and services that are lacking in Los Angeles are health (dental and medical coverage), social (such as going to social events), and advocacy for resources that are tailored for older PLWHA. The areas for future directions include further exploring important information about the lack of health care within the spectrum of HIV/AIDS in Los Angeles and the type of services older PLWHA receive in Los Angeles.

Intentions to Uptake PrEP among Young Black Men who have Sex with Men (YBMSM) and Their Close Friends

Faculty Mentor: Matt Mutchler, Sociology

Pre-Exposure Prophylaxis (PrEP) is an HIV prevention method for individuals who report noncondom use or other risk factors for HIV transmission. PrEP is a daily antiretroviral pill which greatly reduces the chance of becoming infected with HIV. Previous research shows that the disparities in new HIV infections are increasing in YBMSM when compared to other MSM.
Yet, PrEP uptake among YBMSM remains low compared to other MSM. In response, Dr. Mutchler’s team at CSUDH worked with AIDS Project Los Angeles and Reach LA to pilot test an intervention with the intention of increasing PrEP uptake among YBMSM. A mixed methods approach was used to collect data from YBMSM and their close friends in order to better understand how friends communicate and increase knowledge about PrEP. The sample of YBMSM and their Close Friends included in our analyses was 16 participants (8 dyad-pairs). All 16 individuals completed a baseline survey, a brief intervention, and a follow-up survey. The individual characteristics of the sample were as follows: 75.0% African American/Black, 81.0% male, and the mean age was 22.5 years. Using SPSS, we ran univariate, bivariate, and paired sample T-tests on various constructs with our outcome variable, the intention to uptake PrEP, which is as follows: “If this PrEP pill were available today, how likely would you be to use it?” Several of these constructs such as peer sexual health communication; safer sex communication; safer sex intentions; and PrEP acceptability, attitudes, and beliefs, were significantly related to the intention to use PrEP (P<.05). There were also significant differences in the means of two variables between the baseline and follow up surveys. These data will help us understand intentions to use PrEP among YBMSM and their Close Friends, informing PrEP uptake interventions.

6:40:00 PM - 7:00:00 PM
Enya Valentin, Psychology
Levels of narcissism as predicted by selfie sharing and filter usage on Snapchat
Faculty Mentor: L. Mark Carrier, Psychology

Few research studies have examined of the relatively new and popular social media application Snapchat. While it does share some similarities with other photo-sharing social media and social networks, it also has some unique qualities as an application that could be investigated and serve as predictors for a variety of different psychologically-related issues including narcissism which is the focus of this paper. Previous research by Fox and Rooney (2015) has suggested that narcissistic men are more likely to edit their photos and share greater numbers of selfies via social networks. It was then hypothesized that higher numbers of selfies shared on Snapchat would predict higher levels of narcissism. It was also hypothesized that greater average filter usage on pictures shared via Snapchat would predict higher levels of narcissism. A survey was administered to university student volunteers who used Snapchat at least once a month. The survey included items on general usage of Snapchat as well as more specific items including average filter usage and numbers of selfies (and photos of self) shared on Snapchat. The Daily Media Usage Scale, Narcissism Personality Inventory (NPI-13), and Rosenberg Self-Esteem Scale were also included in the survey. Results supported the first hypothesis by finding significantly higher levels of narcissism when comparing the high sharing group (sharing more than 6 selfies per week) and the low sharing group (sharing less than 3 selfies per week). There was however no correlation between filter usage and scores in the NPI-13. Overall, the results
supported a relationship between Snapchat usage and narcissism, consistent with prior studies of other computer-based social media.

7:00:00 PM - 7:20:00 PM
Marcos Jimenez, Psychology
The Impact of Computer Technology Use on Time Perception
Faculty Mentor: Mark Carrier, Psychology

Computer usage is ever increasing with almost every age group utilizing some form of technology. Research has demonstrated a relationship between the frequency of technology use and a distortion of time perception with regard to computer-related tasks. Additionally, individuals who have more computer technology experience have better expectations of the time duration of certain computer tasks when compared with less experienced. The purpose of this experimental study was to test the reported phenomenon of altered time perception during computer use. In this study, participants (N= 69) participants performed a series of pre-determined tasks, each presented in two different modes: technology-based tasks on a computer or non-technology tasks done with a pencil and paper. At the completion of each task, participants estimated the duration of the given task along with their enjoyment and stimulation levels. Lastly, participants completed a questionnaire that looked at their technology usage. Then, participants were grouped into one of three technology groups: light technology user, medium technology user, or heavy technology user. Dividing a participant’s time estimation by the actual time of the task gave a ratio score that showed that participants underestimated the lengths of most tasks. Additionally, data showed a trend towards significance when comparing participant’s time estimation on both computer tasks and paper and pencil tasks with their technology group. Comparing all three technology groups, results trended towards heavy technology users reporting time more accurately than medium technology users and light technology users but the effect was not statistically significant. The findings from this study are anticipated to add scientific knowledge describing how computer technology usage affects our everyday life and how computer technology is affecting our perception of time.
7:20:00 PM - 7:30:00 PM
Coffee Break

7:30:00 PM - 7:50:00 PM
Heather Malca, Sociology


Faculty Mentor: Matt G. Mutchler, Sociology

A pilot study on Young Black Men Who Have Sex with Men (YBMSM) in Los Angeles County is important because Blacks have three times a higher chance of getting infected with HIV than Whites and Latinos. Research on peer support and increased PrEP uptake is limited. Communicating with a close friend may lower stigma and increase support for PrEP uptake. According to the CDC to be eligible for PrEP the criteria is one or more of the following: anal sex without condoms, or a partner who is HIV positive in the past six months), not currently on PrEP, and HIV negative. Target participants (ages 18-24) and their closest friends (any racial, ethnic, or gender background) 18 years old and within 5 years of the target participant. Consent to the study was requested, a brief survey was administered to each participant, and a dyad interview conducted. There was a hundred percent recruitment and retention of all 8 dyads in the study. The purpose of the research presentation is to show how the dyads responded on the pre and post surveys and interviews, and how they discussed PrEP uptake. We used SPSS software to analyze the complementary quantitative data and grounded theory to analyze the qualitative data. We examined feasibility (“Did participants attend and did they talk about PrEP?”) and acceptability (“Did participants accept the proposed intervention and why or why not?”). Results included: “Working with a professional staff person would be helpful to me in considering PrEP” showed that 68.8 percent (11 out of 16) strongly agreed. Primary themes found included Fear of Side Effects, Misconceptions about PrEP and Health Care Provider anxieties. These themes that were identified can help with the framing of a prevention program to increase PrEP uptake among young Black MSM.

7:50:00 PM - 8:10:00 PM
Griselda Bernabe, Karina Aguilar, Psychology

Family Diabetes History and its Influence on Health Outcome

Faculty Mentor: Silvia Santos, Psychology

The present study is part of a larger NIH funded investigation that examined diabetes related family history, illness perceptions, and health outcome of Latino college students who are at a heightened risk for future diabetes onset. Type 2 diabetes is a disease that gradually progresses over various years and is most commonly known for occurring as one gets older. In recent years, this has been seen as a progressing disease in children, teens, and young adults. Participants
were 156 Latino university students who had a first or second degree relative afflicted with Type 2 Diabetes. The objective of our study is to examine family history and illness perceptions towards Latino college students’ health outcome. A path-analysis using linear regression was used to test these models. The results revealed a direct positive effect between genetic risk (1st, 2nd, or 3rd degree relative afflicted) and diabetes risk score. Conversely, psychological distress also showed a direct effect to diabetes risk score. The severity of a relative’s illness to health importance was mediated by disease threat. This states that depending on how severe the illness of the family member, the more threatening the disease is, which in turn the individual will value their health more. Psychological distress to Body Mass Index (BMI) was mediated by the individual’s perceived risk of illness. The more an individual is worried about their relative afflicted with disease, the higher they will perceive the risk of illness, which in turn will have a higher BMI. No matter how worried and threatening the disease can be to an individual, unless it is personalized to the self in the present (i.e., quality of life compromised), weight status will not be healthier in terms of lowering their BMI scores.

8:10:00 PM - 8:30:00 PM
Emily Rose San Diego, Carlos Villalobos
Jacqueline Hernandez, Psychology
Examining the relationship between diabetes knowledge and health behaviors in college students
Faculty Mentor: Erin Merz, Psychology
Type 2 Diabetes (T2D) is a serious health concern and an increasing problem among college students. Health knowledge has been shown to be an important predictor of health behaviors. Research suggests that college students engage in behaviors that increase their risk for T2D (e.g., physical inactivity, sedentary behaviors, unhealthy diet, inadequate sleep, excessive alcohol consumption, smoking). This is surprising given that they should be knowledgeable of the risks and consequences of these behaviors because of their high level of educational attainment. The aims of the current study are to evaluate college students’ knowledge of diabetes and to examine the relationship between diabetes knowledge and T2D risk behaviors in college students. Participants (N = 70) were asked to complete a survey containing questions about their demographic characteristics, diabetes knowledge, and health behaviors. A descriptive analysis will be conducted on all demographic and self-report measures. Furthermore, a series of bivariate regressions will be conducted, with diabetes knowledge as the predictor variable and health behavior (i.e., physical inactivity, sedentary behaviors, unhealthy diet, inadequate sleep, excessive alcohol consumption, smoking) as the outcome variables. Examining diabetes knowledge of college students can help researchers and clinicians better understand what college students know about diabetes and how this relates to their health behaviors. Moreover, it can provide a potential explanation on the increasing rate of T2D among adolescents and young
adults. The implications of this research could play an important role, from a theoretical and clinical perspective, in the development of appropriate prevention strategies in college students.

8:30:00 PM - 8:50:00 PM
Ivett Gabriella, Nicolle Brown, Psychology
Social Influence on Physical Activity Among College Students
Faculty Mentor: Carl Sneed, Psychology

Social influence may be a motivator for increased physical activity and weight loss. However, studies of social influence as correlates of physical activity have been largely inconclusive. The purpose of this study was to examine the relationship between social influence variables and physical activity and diet. Social influence variables included friends' and family's diet and exercise behaviors, and diagnoses of health conditions by a medical professional. Based on Social Cognitive Theory it was hypothesized that exposure to social influences would be associated with increased physical activity and dieting behavior. College students (N=261, 75.6% female) between 18-30 years of age filled out an online survey which measured social influence variables, and their diet and exercise behaviors. After data was split into males and females, hierarchical multiple regression analysis was employed controlling for age. Observing friends' and family’s diet significantly accounted for 14% of the variance in women’s diet, and 3% of the variance in women's exercise levels. Friends' and family’s exercise levels significantly accounted for 6% of the variance in women’s frequency of gym visits. Close friends' and family members' weight loss significantly accounted for 7% of the variance in women’s leisure time physical activity. Being diagnosed with obesity by a medical professional significantly accounted for 14% of the variance in men’s diet, and 7% of the variance in men's gym visits per week. Having been diagnosed with a heart attack or a stroke significantly accounted for 12% of the variance in men’s frequency of exercise. These results show that women are more influenced by observing their friends’ and family’s diet and exercise behaviors, while men are more influenced by an official diagnosis from a medical professional. Additionally, women may associate physical activity with an opportunity to socialize, while men are more focused on health outcomes.
Classification of Tardigrades on Catalina Island

Faculty Mentor: Brendan McNulty, Earth Science

Tardigrades, otherwise known as “water bears” are prevalent on all continents, ranging from Mt. Everest to deep hydrothermal vents. The phylum Tardigrada is divided into two major classes: Eutardigrada and Heterotardigrada. These microscopic organisms have been of interest to scientists due to their ability to withstand harsh environments. Tardigrades are able to enter a cryptobiotic state that enables them to survive extreme temperature, immense pressure, potentially deadly amounts of radiation, and live for up to 100 years (Miller 1997). Before tardigrades enter cryptobiosis, they produce a sugar compound, trehalose, which helps against dehydration and damage against freezing (Satkauskiene 2012). Their ability to produce trehalose has peaked the interest of biomedical scientists because of the potential use in the storage and transportation of organs and unfertilized eggs. (Satkauskiene 2012).

In 2015 Tardigrades were initially discovered on Catalina Island (Aldous et al. 2015 unpublished data). The specimens observed were a combination of terrestrial and marine tardigrades. Terrestrial samples were taken from moss and lichen found throughout the island, and marine samples were taken from barnacles on intertidal rocks (Aldous et al. 2015 unpublished data). DNA sequencing was completed on terrestrial tardigrades by targeting the 18S gene. Images taken this year using a compound light microscope has morphologically confirmed what was discovered molecularly last year. In addition to imaging the morphology of terrestrial tardigrades, a putative new species of marine tardigrade was observed as well. The data generated from this study will also add to the genome database of tardigrades and improve our understanding of the ecology and morphology of Catalina Island tardigrades.

Preventing the Evolution of High-Level Daptomycin-Resistance (HLDR) in Vitro in Strains of Streptococcus mitis by using DAP Combination Antimicrobial Strategies

Faculty Mentor: Nagendra Mishra, Biology

Viridans Groups Streptococci (VGS) are a leading cause of Infective Endocarditis (IE). A prominent pathogen in this group, S. mitis is a commensal organism of the human oral cavity that causes IE as well as bacteremia in immunocompromised hosts. Recently, two S. mitis strains, 351 and SF-100, were shown to develop High-Level Daptomycin-Resistance (HLDR) (DAP MIC > 256 ug/ml) in vitro and in vivo within 48 hours of exposure to Daptomycin (DAP). The goal of this study is to identify antibiotics that, when combined with DAP, prevent the emergence of HLDR in parental 351 and SF-100.
Parental strains 351 and SF-100 S. mitis were serially passaged in DAP alone and DAP + AB combinations for 10-20 days. The following antibiotics were used: Ampicillin (AMP), Ceftaroline (CPT), Gentamicin (GEN), Imipenem monohydrate (IMIP), Linezolid (LIN), Rifampicin (RIF), Tedizolid (TDZ), and Trimethoprim-sulfamethoxazole (TMP:SMX). Minimum inhibitory concentration (MIC) values were measured via Etest or microbroth dilution for all antibiotics. DAP MIC was measured before passaging and at multiple days during passaging. In vitro time-dependent kill curves were conducted with select DAP + AB regimens to assess synergistic activity between antimicrobial reagents.

HLDR prevention in 351 was seen in combinations of DAP with GEN, CPT, and TMP:SMX. In SF100, HLDR was prevented and bacterial growth inhibited by combining DAP with the following: AMP, CPT, GEN, LIN, RIF, and TDZ, at various AB concentrations. Kill curve data shows early synergistic killing of 351 by DAP + GEN, and of SF-100 by DAP + GEN, DAP + LIN, DAP + TDZ.

DAP + AB combinations that prevented development of HLDR in parental 351 and SF-100 may reveal synergistic activity between certain antimicrobial agents. This data, combined with in vitro time-dependent kill curves leads to better understanding of S. mitis virulence regarding antibiotic resistance.

6:40:00 PM - 7:00:00 PM
Hillary Gonzalez, Chemistry
Exploring Methyl Paraben Content of Fresh Blueberries
Faculty Mentor: Barbara Belmont, Chemistry

Online sources have cited that methyl paraben, an ester of p-hydroxybenzoic acid, can be naturally found in plants, including blueberries and thale cress. However, primary literature sources containing data supporting the natural occurrence of methyl paraben in blueberries has not been found. Methyl paraben is widely used as a preservative in foods and cosmetics. Thus, the conclusion that it may be found in blueberries may be due to its use in commercial extracts. Furthermore, previous student research into the presence of methyl paraben in blueberries using HPLC-MS concluded that methyl paraben cannot be found in blueberries at a concentration detection limit of 1 ppm. This study expands on the previous student research by lowering the concentration detection limit. Blueberry extracts were analyzed using GC-MS and showed that methyl paraben was not found fresh blueberries at a concentration detection limit of 0.5 ppm. Future studies include lowering the concentration detection limit even further by freeze-drying fresh blueberries and testing the methyl paraben content of different blueberry species, other berries, and organic blueberries.
Ashley Barbarino, Biochemistry

Aquaculture threatened by global climate change: Physiological responses of purple-hinge rock scallop (Crassadoma gigantea) to decreased pH and increased temperature

Faculty Mentor: Karin Kram, Biology

Global ocean change represents an increasing threat to the aquaculture industry. Among these threats is whether currently farmed species, such as the purple-hinge rock scallop (Crassadoma gigantea), will possess the capacity to acclimatize to rapidly changing ocean conditions, including pH or temperature changes, and therefore remain profitable in the future. Symbiotic relationships between animals and bacteria are ubiquitous in nature and are increasingly recognized as integral contributors in setting the tolerance limits of marine species to environmental change. Despite this importance, little is known about how environmental conditions affect the genetic and functional variability of the microbiome of aquaculture species. This information is crucial to determine if there are detrimental effects to the microbial flora when dealing with climate and pH change, which may cause harm to both aquaculture and natural populations of scallops. Since aquaculture for all types of scallops, including C. gigantea, is a challenge for most aquafarmers, elucidating how the microbiomes of these animals are affected by climate change is another key tool in maintaining production of these key resources. Our research considers the possible outcomes of global climate change for C. gigantea, measuring how well it can survive in the predicted climate of the year 2100. Previously, we grew C. gigantea in conditions with two variables: water temperature (the current 14°C and the predicted 21°C + 0.05) and pH (the current 8.0 and the predicted 7.6) for six weeks. We will use samples of tissue, specifically gill and stomach tissue, from the C. gigantea incubated in these environmental conditions, and test for differences in microbial taxonomy and function by next-generation sequencing using the metagenomes of the samples. This information will help aquafarmers plan for future climate change, also give scientists a better idea of how the environment affects symbiotic relationships between microbes and their host.

Monica Warner, Biology

Evaluating species differentiation in endangered rush lilies using population genetics.

Faculty Mentor: Kathryn Theiss, Biology

The taxonomy of the closely-related rush lilies (Hastingisa; Agavoideae; Asparagaceae) has recently been a point of contention. Morphological comparisons and reproductive biology studies have led to contradictory conclusions on the taxonomic status of the threatened Hastingsia atropurpurea and H. bracteosa. Becking (1986) split H. atropurpurea from H. bracteosa based on morphological
distinctiveness and lack of hybridization. Lang and Zika (1997) argued any distinctions were insignificant and therefore, separation of the taxa, unjustified. Our objective was to explore their species differentiation at the population genetic and morphological levels. We collected leaf tissue samples of a total of 160 of individuals from the two taxa in eight populations in southwestern Oregon. All populations showed sympatry with H. serpentinicola, but we did not find populations that were sympatric for our two taxa of interest. Genomic DNA was extracted and we genotyped the samples using 12 microsatellite loci previously developed for the sister genus Camassia. We analyzed the results for genetic structure across the putative taxa and compared this to morphological data. We also looked for evidence of gene flow between populations, although we found very little morphological evidence of hybridization. We hope that these analyses will help land managers evaluate the connectivity of the different populations and make appropriate conservation decisions. Future studies include a phylogenomic study of both Hastingsia and its sister genus Camassia to evaluate the evolutionary relationships among these taxa.

7:50:00 PM - 8:10:00 PM
Eric Medina, Biology
Using BACs to Study Gene Expression in Zebrafish
Faculty Mentor: Fang Wang, Biology

I am investigating genes enriched in the skin of zebrafish (Danio rerio). This study will help us understand fundamental skin cell biology that is likely relevant to various diseases. Our lab has analyzed the gene expression profiles of zebrafish skin using RNA-seq. Several candidate skin-enriched genes were identified: occludin-b (oclnb), desmocollin-2 (dsc2), collagen 28 (col28), and ARAP1. Little is known about ARAP1, while previous research suggest that oclnb, dsc2 and col28 encode proteins that are important for skin cell structure, but more studies are needed. I am using bacterial artificial chromosomes (BACs) to detect gene expression. Recombinant DNA molecules are regularly used for gene expression in a model organism with the desire to detect which cells produce the protein that is encoded by that gene. BACs can carry very long DNA fragments (up to 300 kb) and frequently incorporate the entire structure of a gene. When compared to smaller expression-plasmids, which hold up to 10 kb, BACs provide more accurate information on gene expression and protein localization. In order to examine if our genes of interest express in a specific skin layer (periderm or basal), I used a BAC transgene fused to a green fluorescent protein (GFP). I conducted microinjections in two different transgenic zebrafish lines corresponding to specific fluorescent markers for periderm cells or basal cells. The expression of oclnb was observed at two days post fertilization (dpf). In order to localize the protein, I took images of live zebrafish larvae mounted in agarose gel using confocal microscopy. OCLNB protein was observed only in the periderm layer. Currently, BAC transgenes for dsc2, col28, and ARAP1 are being developed. Since BAC transgenes can be used to illustrate the specific protein location in skin cells, they are also great tools for studying the defects that affect skin cell structure and function.
In 2012, President Obama announced he will be taking unilateral action by issuing an Executive Order to help young undocumented individuals who were brought to the US as children receive temporary deportation relief through prosecutorial discretion.

Some hailed the Executive Order as a first step toward legitimizing the 4 million individuals who are in the United States with no formal paperwork but contribute significantly to the country. Others argued against the Order as executive over-step and unconstitutional amnesty for individuals who broke the law and should be deported.

The research focuses on the economic, societal, and political impact of DACA on all levels of government. To aid the research in this study, we utilized two research methods; the logic model and the criterion and alternatives model (CAMS). The logic model identified the problem that DACA was intended to address and evaluated the success of the DACA. The logic model highlighted seven areas for research to aid with the assessment of DACA; resources, activities, outputs, customers, short, intermediate, and long-term outcomes.

The CAMS research model was used to analyze the data on the two alternate policies to DACA; the Dream Act and Amnesty. The CAMS research model was used to analyze and assess each alternative policy based on the following criteria; cost benefit, political feasibility, effectiveness, and equity.

Based on our research models, we recommend amnesty as the best immigration policy. Our recommendations are synthesized by five arguments in support of amnesty for undocumented immigrants.

With the election of Donald Trump, the fate of DACA and other immigration reform is unknown. However, it is important to present information based on facts and research to educate the public on the effects of DACA.
The research aims to examine the attitude and readiness of students preparing for careers in the STEM field.

The data was gathered through a survey consisting of 28 questions. The first four questions ask the interviewee for their gender, ethnicity, grade, and major; these first questions function to split the participants so that different social aspects can be incorporated in the study. The rest of questions examine the influences, readiness, and attitude towards careers in the STEM field. The participants are students from California State University Dominguez Hills and Long Beach Community College. Analysis is conducted in R and its graphical packages.

Statistical data of survey results are calculated and visually presented, including means, standard divisions, and correlations to exhibit the significance and relevance of multiple factors impacting students’ readiness for STEM careers. The overall results show that females are more easily adversely influenced about their attitudes towards the STEM field; although, they in general have a more favorable perception of STEM career than male students.

As opportunities in the STEM field rise, it is important to analyze how different our diverse students attempt to partake. The findings from this study offer us some clues on what our education system can do to help students in general, and female students in particular, gain confidence in pursuing a STEM career amid rapid changes in the STEM field as globalization intensifies.

6:40:00 PM - 7:00:00 PM
Natalie Liberman, Jose Franco, CBAPP - Marketing and Management

Google Glass: The Influence of Recording Interviews on Prefrontal Cortex Activation

Faculty Mentor: Thomas Norman, CBAPP - Marketing and Management

The prefrontal cortex of the brain is responsible for executive functioning including decision-making, problem solving, multitasking, attention and focus, and working memory. Although there is little research directly examining oxygenation in the prefrontal cortex during employment interviews, there is research that examines the use of recording devices during employment interviews. The current study closes this gap by examining whether different recording devices influence anxiety levels which can predict impaired executive functioning, and, in turn, predicts poor interview performance. This study tests whether there is a difference between applicants in interviews that are either being recorded by an interviewer wearing google glass (n = 5), recorded with a large video camera (n = 5), or not recorded through video at all (n = 5). The Functional Near Infrared Spectroscopic device (fNIR) is used in this study to enhance understanding of how the use of recording technology such Google Glass may affect applicants’ oxygenation in the prefrontal cortex as well as their use of executive functions during the
task of a mock interview for a job position. fNIR measures the amount of oxygen being delivered to brain tissues using near infrared light, and the amount of nearly visible red light from a low power light beam that is reflected from blood flow. Five questions replicated from sales position interviews with a large retail corporation were asked during the mock interview. Pre-interview state anxiety was measured using the six-item short-form of the state scale of the Spielberger State-Trait Anxiety Inventory (STAI). Post-interview anxiety was measured using the Measure of Anxiety in Selection Interviews (MASI) scale. Data collection from 15 students is complete and currently undergoing preliminary analysis. Final analysis of the data will be completed mid-December. This analysis will determine if different recording devices influence anxiety levels which can predict impaired executive functioning and, in turn, poor interview performance.

7:00:00 PM - 7:20:00 PM
Dhanushka Kumarasinghe, Communication

Come Catch Pokemon at the Celadon City Department Store!: Player Perceptions Toward Businesses Within Pokemon Go Hotspots

Faculty Mentor: Keun Yeong Kim, Communication

This study examined the perceptions of Pokemon Go players toward local area businesses within hotspots for play. Previous marketing practices related to this augmented reality (AR) game focused on consumer mobilization, but did not consider that these players have more in common with enthusiast communities rather than typical consumers. Research on enthusiast communities has shown their motivations for mobilization center around their chosen activity. The goal of this study was to identify the marketing practices that appealed to players and translate this data in order for businesses to effectively market using AR games in the future. These marketing practices are categorized into four groups: businesses that benefit play, businesses that do not benefit play, promotions that benefit play, and promotions that do not benefit play. An online questionnaire was used to test the typical habits, behavioral intentions, and attitudes of Pokemon Go players toward these competing elements. This study investigated whether players associate positive behavioral intentions with businesses and promotions that benefit gameplay. The findings showed that players do associate positive behavioral intentions with businesses and promotions that benefit play and social interaction (e.g. food services or community events). Participants were uninterested in businesses that did not benefit play (e.g. retail stores or entertainment services) and promotions that did not benefit play (e.g. discounts and themed products). The results suggest that AR games are a marketing tool that benefits specific types of businesses and can only be successful when the promotions utilized benefit the gameplay.
Danielle Clack, Business Administration

Targets Failure in Canada

Faculty Mentor: Orie Berezan, Business

This presentation gives voice to the people of Canada about their shopping experience with Target during its time in Canada. Many researchers have evaluated Target’s failure in Canada, but few have done so from the perspective of the consumer. This study will bring the consumer to the table and help provide better understanding as to why Target failed its first time going global.

This paper will look into the viewpoint of the Canadian consumer to answer the main question: Why did Target in Canada fail? By creating a research survey, I will be able to measure the consumer’s expectations and needs and if Target actually met them using the Gap Model, specifically with Gap 1: Knowledge Gap 4: Communication being the main focus and tools used. They apply to my study because these will be the best gaps to use to measure satisfaction. Discussions among researchers and business professionals look into the business perspective of Targets failure. By using the gap model this discussion invites discussion as to what the Canadian consumers were expecting and needing. The results will help not only Target but other companies in the long run to get a better understanding of Canadian consumers and their expectations.

How my methodology will be implemented is by using social media mainly twitter and Facebook, to get in contact with actual Canadian consumers making it a snowball sampling method since everyone was asked to pass the survey on to others. For the results the data is currently still in progress. So far, I have results from 27 participants. This data analysis will be complete by research day.

Leonel Arana, Business Administration

Elon Musk Bio-Poem

Faculty Mentor: Gary Polk, Department of Management & Marketing
Our assignment asked us to write about a successful business person and encapsulate what they have done throughout their life along with how they run their businesses. We were tasked with evaluating their managerial style, the education they pursued, why we chose them, along with basic information about their life. When presenting our findings to the class we had the choice of whether we wanted to present in the third or first person along with a choice to emulate the mannerisms of our businessperson. When researching our businessperson we were tasked with reading a book related to our person and afterwards we had to contrast the information with what we read in our textbook throughout the semester. Our poem, while only twelve lines long, contains enough information to get a real sense of what this person has gone through in their life and how the habits they developed made them successful. I chose to do my presentation on the tech billionaire, Elon Musk. His research into electric cars, space travel, and even internet banking made me want to learn about how he started. When presenting to the class I chose to do my presentation in a first person format. Along with presenting in first person, I chose to emulate one of his personal habits as well which helped me give a memorable presentation.
The Inevitable Relationship between People and Social Sites

Faculty Mentor: Mohsen Beheshti, Computer Science

When people use social media, users need to understand what it means to place personal information on the internet. While this new age of technology is making daily lives easier for people around the world, it is also making cyber thief easier as well. These “Social Engineers” will normally target people on popular social sites as OkCupid a social dating site for lonely people, FaceBook a social page where people post any random information that may be important, and LinkedIn an professional website that has people’s resumes and work related information. I will be using the social engineering attack method of “Baiting” to collect information on these three sites. Baiting is done by creating a fake account that will be easily found, and people will let their guard down to chat with this fake account. Then people unintentionally leak information out to these thieves. I am explaining the possible damage social engineers can do with the information retrieved from people over the web.

Phishing

Faculty Mentor: Mohsen Behesti, Computer Science

Phishing is defined as the act of defrauding an online account holder of financial information by posing as a legitimate company. Phishing is the leading cause of credit card fraud and also data leakage inside of companies. However, phishing not only can affect the user’s personal information but those around them. It is the most common form of social engineering and is the most popular. Everything from personal information such as addresses and even little information such as the high school you went to. The most common way phishing happens is through email. Log onto anyone’s Yahoo or Gmail account and sift past the thousands of messages. Almost certainly there will be some type of spam phishing in the inbox. A tech savvy individual can spot a phishing attempt a mile away and simply removes it. But what about the individuals that do click on the link, what happens? What about those individuals makes them susceptible to these types of phishing attempts? This paper will give analysis on what types of phishing attempts are out there. It will also show the demographics of who are mainly targeted by phishing attempts and how these people typically fall for the phishing attempt. This paper also aims to educate those who may not know much about phishing and what they can do to prevent it from occurring in the future.
Mobile Gaming has seen an extreme increase in popularity with the proliferation of smartphones, tablets, and personal computers. Together with the widespread access to faster internet, research data shows that a significant portion of time spent online is dedicated to playing games. As a result, independent game development has also gained attention as a possible career choice for the average creative. With the emergence of new game making tools, individuals and small teams are able to utilize intuitive software to develop commercially viable products. One of these tools is Construct 2, the HTML5 based game editor that uses drag and drop functionality. This software allows users to create complex and engaging two dimensional games with little to no programming experience. Utilizing pre-existing game design techniques and conventions this paper shows how I developed an original RPG/simulation/tower defense game that incorporates procedural generation. Upon completion of a beta I will have the class test the game and give feedback on whether PG enhances the players experience positively or negatively. This paper also covers the publication and monetization process of a mobile game.

Keywords: Construct 2, HTML5, procedural generation, game design, publication

Peer-to-Peer Networking is a method of data transfer achieved through the combined efforts of members of a network. Although the architecture has been around in one form or another for the past forty years, it was the advent of file sharing services and protocols such as Napster and BitTorrent that brought P2P to the general publics’ attention. Since then it has been closely associated with the illegal sharing of
media and other data. Beyond that however, the P2P model offers legitimate uses and advantages over more common server-based methods. A major issue with the use of public Peer-to-Peer networks is that of maintaining one’s privacy. In this paper I describe how P2P networks function, with special attention to the Bittorrent protocol, and the issue of maintaining anonymity.

7:20:00 PM - 7:30:00 PM

7:30:00 PM - 7:50:00 PM

Alexander Ing, Computer Science

Efficient Middlebox Placement in SDN-Enabled Data Centers

Faculty Mentor: Bin Tang, Computer Science

Data centers consist of tens of thousands of server machines that support a large number of Internet services such as social networking, video streaming, and search engines. The increase of devices connecting to the internet and the growth of internet services pose new challenges to these datacenters and the networks that support them. Software Defined Networks (SDN) and Network Function Virtualization in cloud data centers provide unique opportunities to optimize the performance and improve quality of service within these data centers. One such opportunity for improvement is effective middlebox placement within the datacenter’s network. A middlebox, also called network appliance, is a computer networking device that transforms, inspects, filters, or otherwise manipulates traffic for purposes other than packet forwarding. Examples of middlebox includes firewalls, load balancers, intrusion detection/prevention systems. Traditional middlebox hardware is widely deployed in enterprise networks to improve network security and performance. However, deploying middleboxes is currently a hard and complex problem, which involves network operator to manually install them inside networks. This is neither flexible nor efficient, and error-prone. Data center policies require that VM traffic in data centers traverse a sequence of specified middleboxes, for the purposes of security and performance. There are a few studies that address such middlebox placement problem, however, none of them are from an algorithmic angle. In this work, we first formulate this problem formally. We propose two time-efficient heuristic algorithms that can be used to solve the middlebox placement problem, one is Random, the other is Greedy. We show via extensive simulations that Greedy always outperforms Random in different network scenarios. As a future work, we would like to take into consideration of load balancing. That is, the VM communication traffic on different switches and middleboxes should be equally distributed, without overloading any of the particular device.
Wireless Network

Faculty Mentor: Dr Mohsen Beheshti, computer department

Since wireless networks are becoming increasingly popular due to the ease and low cost of routers. Most LANs now a days use wireless technologies. Wireless Networks provide different challenges compared to wired networks, especially for Network IT personal and in securing data transit between the customers and access points. The wireless standard, 802.11b provides possibilities for securing wireless connection and despite the limitations. Mechanisms are provided to maintain and secure the network in a good manner. Wireless communication is the most growing communication because everyone needs to be connected with the device that they carry. In addition, wireless local area networks currently replace or supplement wired networks in many homes, business, and campuses. Wireless Networks enables people to communicate and access computers, files, and peripheral devices. It provides mobile movement and the ability to move around to different parts of the world. Wireless Networks also allow people to connect wireless with mobile devices, laptops, tablets and internet of things from a location that they prefer.

Game Servers

Faculty Mentor: Moshe Beheshti, Computer Science

The information content that will be explained in the next passages will pertain to game servers. The passages will dive into many aspects of game server’s. For example, the history of game servers. Another aspect of the investigation will also lead me to explain the process of setting up a personal web server that let certain users access its content. My content will consist of a few things, but the main focus will be the installation and setting up of a web game server. A game server is a program that allow for users to play online video games with each other.
At first glance, American colonies did not seem to possess classes in their society. With further research one can definitely see a few societal differences. In the period spanning 1492-1865 there are several works of art that exemplify America’s attempted class structuring. At first, people all seemed to want to emulate recognition like the established English’s society. They also strived to imitate Classical architecture because of its acclaim and reference to a previous great civilization. This then led to acceptance of their new identity as a wholesome country of their own. The “America” class explored and revered their surroundings. With this, we can definitely see America’s class ramifications through the arts.

Lastly, America used its rural state and growing nationalism as a means of categorization. Along with its vastness of nature and Manifest Destiny ideology, this burgeoning society was deciding to differentiate themselves through their government, camaraderie and patriotism. Also, one can definitely see the re-occurrence of landscape and wilderness; Nature forms a unifying platform.

No Labels CSUDH is an awareness campaign created by three students. The group is a mixture of Art/Design students Kiana Seva’aetasi, and Brianna Garcia, and Amelia Soto as a Communications student. We have designed a campaign strategy to raise awareness about the importance of tolerance on campus with a unique voice that is also designed to gain awareness on the topic. Discussed will be the strategy of using Art/Design and Communications together to promote awareness efforts.

Our Methods have incorporated Art/Design and Communication skills by our efforts in: Social media influence, logo design, advertisements, infographics, GIF advertisements, radio advertisements, deliverables, establishing partnerships on campus, and holding a campus event. The event will took place Nov. 29, 2016, and we plan to produce another event in January. We will be distributing our deliverables which are make to look like the labels the Japanese- American put into internment camps had to wear. We will also purchased a snapchat filter at that time, so that students can show their support
on social media. As a group we have established connections with the campus newspaper, Loker Student union, the Peace Club, and the PSRSSA CSUDH chapter.

6:40:00 PM - 7:00:00 PM
Meredith Gossland, Art and Design
Japanese Family Crests as an Japanese Art History Timeline
Faculty Mentor: Kirsten Ellsworth, Art and Design

Japanese Family Crests are a major component of Japanese art history from 600 CE until today. Can historians use these designs to track the changes and influences in Japanese art history over the centuries? Can crest design be used as a timeline in Japanese art, social, and political histories?

Most history books that focus on Japanese art have completely omitted the family crest as part of the art of Japan; yet Kamon have survived and blossomed from the 6th century and remain in use today throughout the world. Nevertheless, there has been a sharp decline in the number of designers who specialize in this area and the art is in danger of being lost. Today the handful of Japanese designers that remain have been deemed National Living Treasures in Japan and the purpose of this research is to serve as a tool to help the revive this art and to inspire historians and those who write art history textbooks to include this national design technique in their works. Even world renowned artists such as Hiroshige, Hokusai and Utamaro created Kamons during their artistic careers. These crest designs are found on architecture, in paintings, on clothing and other textiles, and are used as logo designs, as well on the ubiquitous Japanese signature seal used for personal legal documents.

The crests show marked changes in symbolism and design over the years, reflecting the influences of Chinese, Korean, and Western design and culture, as they were introduced to the island nation, as well as the cultural transitions within Japanese society. Through these crests one can see the historic transition from individual family crests to corporate logos of today and the transmission of these designs and their influence on the logos of corporations around the world as Japan came into the sphere of global trade.
Crohn’s disease is a chronic condition that interrupts daily functioning because it negatively affects the lining of the digestive tract. While there is no cure, symptom management and ability to cope with this disease is crucial for people affected by this condition. A qualitative study was conducted to better understand the experiences of people living with Crohn’s disease to investigate personal perspectives on how this disease impacts occupational engagement. Using a phenomenological research design, open-ended semi-structured interviews were conducted with seven adults who have been experiencing symptoms of Crohn’s disease for ten years or more. Through hermeneutic analysis, five themes emerged: (1) interruptions of valued occupations, (2) learning how integrating disease management daily can influence routines and choices, (3) insight into personal limitations and pain tolerance influences social participation, (4) continued need for adaptation, and (5) emergence of mentor role. This substantiates previous literature that discusses the importance of creating therapeutic encounters to arrive at a thorough understanding of perceived supports and barriers. Treatment goals that support individuals living with CD can best promote the incorporation of medical needs into daily routines and participation choices. Such a partnership incorporates the multitude of medical, personal, social, and societal factors that adults with CD internally balance on a daily basis. Through modeling client-centered care to find personalized solutions to daily occupations, occupational therapists become active in fostering role competency that can evolve into assuming mentorship roles with others diagnosed with CD across occupational development stages.

Keywords: Crohn’s disease, qualitative, illness experience, lived experience, daily impact, routines, phenomenology, interviews, chronic
volition, as it impacts their identity, routines, and sense of purpose, warrants further investigation. The purpose of this study is to understand the motivations of long-term animal shelter volunteers. The researchers utilized a qualitative narrative approach that gathers thick, rich descriptions of participants’ experiences to explore common themes. The researchers audio-recorded and transcribed interviews of seven animal shelter volunteers. Researchers analyzed the transcripts independently, then reviewed the data together to establish inter-researcher agreement. Twenty-two categories relating to volunteer motivations were determined and, from these, six themes were identified: (1) time as a facilitator or barrier; (2) escape from life stressors as initial motivation; (3) ability to cope with challenges of the position; (4) nonjudgmental environment; (5) positive emotional effects of helping animals; (6) caretaker as identity. Motivations were found to span personal, social, and environmental domains across the dimensions of past, present, and future time. Practical implications of this study include assisting occupational therapists (OTs) in establishing the just-right fit between clients and the occupational domains of volunteer exploration and participation. OTs can apply these findings to assist in treating the psychosocial needs of clients who may benefit from volunteering with animals.

6:40:00 PM - 7:00:00 PM
Stephanie Evangelist, Meredith Brockriede
Michelle Branchini
Kalvin Alpizar, Occupational Therapy

Occupational Therapist Experience: Addressing Sexuality with Persons with Spinal Cord Injury
Faculty Mentor: Claudia Peyton, Occupational Therapy

Background. Spinal cord injury is a life-changing diagnosis that may alter an individual’s sexual functioning and sexuality. Addressing sexuality is becoming increasingly important for occupational therapists, as it plays an important role in a person’s health and well-being. Currently, the occupational therapist’s perspective in addressing this topic is not widely represented in the literature. The purpose of this phenomenological study is to understand the lived experience of occupational therapists in addressing sexuality for persons with spinal cord injury. Methods. A transcendental phenomenological approach was used to represent the lived experience of occupational therapists in addressing this issue. Semi-structured interviews were conducted with nine occupational therapists with a minimum of one year experience. Results. The research demonstrates that factors that influence the occupational therapist experience in addressing sexuality include therapist and client attributes (e.g. culture, age, sex, comfort level), workplace characteristics (e.g. staff support, facility policies, education), and client priorities. Conclusions. Given that the perspective of occupational therapists has not been addressed in the current body of literature, this study aims to develop a deeper understanding of sexual functioning and sexuality education and interventions with spinal cord injured clients. This study provides supportive evidence of factors that contribute to healthcare professionals’ knowledge of the issues surrounding sexuality with persons with spinal cord injury. Findings from this study may enhance the ease of occupational
therapists, physical therapists, and other healthcare professionals in working with spinal cord injured clients. Further research on this topic could increase the quality of therapy received by persons with spinal cord injury.

7:00:00 PM - 7:20:00 PM

7:20:00 PM - 7:30:00 PM
Coffee Break

7:30:00 PM - 7:50:00 PM
Shannon Moy, Ling Li
Woo (Abe), Kim, Occupational Therapy

"Managing her pain is a little bit of a guesstimate": Caregiver experience managing pain in a child with Rett syndrome - A phenomenological study

Faculty Mentor: Claudia Peyton, Occupational Therapy

Issue statement: Existing literature on Rett syndrome primarily focuses on biomedical considerations and biological causes or genetic research surrounding Rett syndrome. However, few studies look at the lived experience of the primary caregivers.

Purpose: To investigate how the responsibility of managing pain in a child with Rett syndrome affects the primary caregiver.

Approach and Method: A qualitative transcendental phenomenological approach was selected to investigate the experience of navigating and balancing the concerns and variables present when caring for a child with Rett syndrome. Seven participants were asked to describe how the phenomena of managing pain for their child has affected their lives. Semi-structured interview questions were used to elucidate the lived experience of participants during informal interviews.

Discussion: Our data alludes to facial expression and vocalizations as indicators of pain. The interviewed parents were confident that they could detect pain from indirect cues from their children. Use of medication was prevalent in the interview data, though parents expressed reservations about over-medicating their children. The interviews revealed a predilection for relying on other parents of children with Rett syndrome for information. Discussion about help from medical professionals was not
prevalent. In fact, caregivers felt their care was superior to that of medical professionals because of their connection with their children.

Future Research: Questions for future research include the effect of a Rett syndrome diagnosis on marriage relationships, the relationship between a Rett syndrome diagnosis and finances, and the relationship between children with Rett syndrome, their parents and healthcare professionals.

Conclusions: This research provides insight into the lives of the parents of children with Rett syndrome, and a better understanding of the problems they face in managing their child’s pain.

7:50:00 PM - 8:10:00 PM
Serli Nazarian, Carey Maust
Elaine Medina, Occupational Therapy
"My Dog Saved My Life": Dog-Veteran Companionship
Faculty Mentor: Claudia Peyton, Occupational Therapy

Veterans have long been one of the most underserved populations in the U.S., yet the number of veterans who return home with a disability incurred during their military service continues to rise. The addition of a companion dog in a veteran’s life can aid in his or her adjustment to daily activities and demands. The purpose of this study is to investigate how dog companionship impacts veterans’ social and emotional well-being. The study discusses the lived experiences of veterans and their interactions with a companion dog. Data was collected using semi-structured interviews with ten participants who were recruited through convenience sampling. Interviews were transcribed, reduced, and analyzed using the phenomenological research method developed by Moustakas (1994). Data analysis included the following steps: bracketing, horizontalization, and creation of clusters of meaning; concluding in the development of the essential structure of the phenomenon. The uniqueness of this study is veterans’ descriptions of the impact of companion dogs on their lives and ability to function. The results illuminated two themes: (1) the impact of having on dog on social participation and (2) the emotional support a companion dog offers to participants on return home from military service. These findings reinforce previous findings that the addition of a companion dog provides significant social and emotional support to veterans following their military service and has highlighted the importance of finding alternative therapeutic options that will alleviate the stressful transition from military service to civilian life. Findings may impact public policy and help local communities develop stronger animal-assisted programs to assist with veterans’ reintegration into society. Further research may help occupational therapists and other health care providers better understand the value of utilizing dogs as a therapeutic intervention.
Occupational Therapists’ Experiences of Grief with Client Death: A Phenomenological Study

Faculty Mentor: Claudia Peyton, Occupational Therapy

Occupational therapists (OTs) routinely encounter client death yet little research exists on how they manage associated grief. The purpose of this qualitative transcendental phenomenology is to describe the OTs' experiences of bereavement surrounding client death. Data was collected using semi-structured interviews from seven OTs with a minimum of five years of experience and who lost at least one client due to death. The transcribed interviews were analyzed using the following steps: The investigators bracketed their presuppositions on the topic, participant data was reduced to significant statements, duplicate statements were eliminated and then clustered thematically, and finally the essential structures of the phenomenon were depicted and then synthesized to describe the common essence of the experience of grief due to client death. The uniqueness of this study's findings indicate the emergence of five themes: (1) The OTs’ personal beliefs and perspectives affected their experience of losing a client. (2) The OTs’ personal characteristics influenced their response to client death. (3) The OTs utilized various strategies to honor and remember the deceased. (4) Anticipation of a client’s death allowed for mental preparation for their forthcoming grief. (5) The unique nature of occupational therapy lends itself to building relationships with clients which affects the experience of grief. Implications of this study suggest a need for improved education in OT programs to prepare new graduates for dealing with grief regarding the death of a client. An area for future research could focus on perceptions from male therapists or of new graduates, as this study only included females’ perspectives.

“Hard, but Worth It”: The Lived Experience of Foster Parents Caring for Children with Prenatal Substance Exposure

Faculty Mentor: Claudia Peyton, Occupational Therapy

PROBLEM. Each year, approximately 10 percent of all infants are exposed to substances prenatally (Young et al., 2009). These children are often removed from their homes and placed in foster care. Although there is an abundance of literature published addressing the effects of prenatal substance exposure on the child, there is little research describing the perspective of the foster parent. In the occupational therapy literature, the research on this topic was not found.
PURPOSE. The purpose of this study is to address this gap in the literature by examining the lived occupational experience of foster parents caring for children with prenatal substance exposure.

METHOD. To examine this experience, a phenomenological approach was selected. This method provides a collective essence of the experience of a phenomenon through reduction of individual descriptions of a lived experience. Data was collected from seven participants through two semi-structured interviews. All interviews were recorded and transcribed verbatim and significant statements, clusters of meaning and overall themes were then extracted from the interviews culminating in an exhaustive description of this phenomenon.

RESULTS. A thematic analysis was conducted, and several themes emerged from the data that captured the experience of parenting a foster child. Foster parents described how parenting impacted many relationships, how coping with difficult emotions was challenging, and how restructuring of their daily routine was essential. However, despite all the challenges, the foster parents concluded that the experience was “hard, but worth it.”

CONCLUSION. This study contributes to closing the gap in the occupational therapy literature and provides a deeper understanding of the shared experience of caregivers of children prenatally exposed to substances.