

Undergraduate Research Symposium May 18, 2018 Mary Gates Hall

Online Proceedings

POSTER SESSION 1

Commons West, Easel 33

11:00 AM to 1:00 PM

The Doorway Project: Using Digital Storytelling to Assess the Needs of Homeless Youth

Moriah Justine Ortega, Senior, Nursing

UW Honors Program

Mentor: Josephine Ensign, Psychosocial & Community Health, Nursing

Homelessness among youth in Seattle's University District has become a crisis that has been overlooked and neglected by our community. The lack of accessible resources and poor educational opportunities, have made it difficult for this population to have their basic needs met. A major resource homeless youth lack is a solid support system. This research project is part of a larger community project that is looking at the barriers that are inhibiting homeless youth from meeting their needs and escaping homelessness. The purpose of this study is to describe, from the youth's perspective, the resources and support that are needed to help them achieve overall health. The larger study will design and implement a sustainable community café for homeless youth and youth at risk for homelessness in the University District that provides services and support. For this study, we applied a digital storytelling methodology, which is used as a community based participatory approach, to gain better understanding of youth homelessness and their needs in their own words. Digital storytelling is typically a short video 3-5 minutes long. The interviews were guided by questions as well as open conversation for the participant's to share their story of homelessness. We conducted three interviews and created three digital stories. This study did not contain random sampling and was conducted strictly by a volunteer basis. After the interviews were conducted we used digital images with voice-over narrative to create the digital story. The aim was to analyze these videos to shed light on the specific needs the youth have. It also served to give researchers more information on the particular barriers homeless youth are currently facing and guided activities within the community café. These will also help suggest legal and policy reform in the homeless youth community as well as bring greater awareness to the community.

POSTER SESSION 1

Commons West, Easel 34

11:00 AM to 1:00 PM

The Doorway Project: Addressing Youth Homelessness with a Community Café Model

Nina Martha Cole, Fifth Year, Nursing

UW Honors Program

Ann Phuong Thi Nguyen, Senior, Nursing, Public Health-Global Health

UW Honors Program

Mentor: Josephine Ensign, Psychosocial & Community Health, Nursing

According to a January 2017 Point-in-Time count, there were over 11,000 individuals experiencing homelessness in the Seattle/King County region, with approximately 30% of those individuals under the age of 25. The University District of Seattle has been designated as an area needing special attention and increased funding to support homeless youth and young adults. Our proposal is to create an urban community café (The Doorway Café) to bridge the strengths of the University District with the social, legal, and health care needs of local homeless and food insecure youth in one centralized location. We predict that the creation of a navigation center/café will allow for an improved system of integrated services, ultimately leading to housing security and improved health outcomes. We conducted a qualitative study consisting of twenty in-depth, semi-structured interviews with homeless youth in the University District. Interviews were recorded, transcribed, and thematically analyzed to highlight data pertaining to personal lived experiences of homelessness, basic needs, and services to integrate into The Doorway Café. Preliminary thematic analysis suggests that having stable housing is a necessary prerequisite for youth and young adults to care for their other basic needs, such as health care. Interviewees expressed that the most successful café would feel safe and the resources offered would be low-barrier. The results of our research inform the services The Doorway Café should offer based on the responses of local homeless youth. Future research should explore the role that The Doorway Café has in continuity of services and in increasing housing stability among youth in the University District.

SESSION 1K

BODIES WITH AND WITHOUT RIGHTS: ACTIVISM, ANALYSIS, ARCHIVES

*Session Moderator: Priti Ramamurthy, Gender, Women &
Sexuality Studies*
MGH 254

12:30 PM to 2:15 PM

* Note: Titles in order of presentation.

Intergenerational Communication of Trauma and Cross-Generational Effects of Japanese Incarceration on Sansei

*Alice Lau, Senior, Communication, Education, Communities
and Organizations*

UW Honors Program

Mentor: Ralina Joseph, Communication

Oral history projects documenting Japanese incarceration typically prioritize the stories of those that directly experienced the traumas of incarceration. Although trauma can be experienced by one generation, it can manifest and be passed down to subsequent generations through storytelling; trauma can also be experienced through silence, or the refusal to share stories surrounding a traumatic event, affecting individual and cultural identity. Very little scholarship has documented or closely examined the oral histories of those who did not experience Japanese incarceration themselves but have family members who did. The goal of this project is to examine the intergenerational communication of trauma and the cross-generational effects of Japanese incarceration on the Sansei generation (grandchildren of Japanese immigrants). Densho is an organization that documents and makes accessible through their online database the oral histories of Japanese incarceration experiences using digital video recordings and full written transcriptions of interviews conducted by them. I used digital video footage and interview transcriptions to qualitatively analyze for emerging themes or trends among the Sansei interviews surrounding how incarceration was communicated to them and its effects on them. I expect a common theme of emotional restraint and lack of communication of trauma among family members due to the impact of incarceration on identity and cultural practices. I also expect a trend among the Sansei interviews for seeking alternative means outside of family storytelling to learn about Japanese incarceration. Another result I expect is having their sense of cultural identity radicalized to seek justice for incarceration in varying ways. Placing significance on the generation of Japanese Americans who did not directly experience incarceration can further broaden the discourse of meaningful oral histories.

SESSION 1L

SOUND TO MOUNTAINS: WATER, LIFE, AND CLIMATE IN THE SALISH SEA

*Session Moderator: Peter Selkin, School of Interdisciplinary
Arts & Sciences*
MGH 271

12:30 PM to 2:15 PM

* Note: Titles in order of presentation.

Cloud and Precipitation Structure on the Leeward Side of the Olympic Mountains

*Jamin Kurtis (Jamin) Rader, Senior, Atmospheric Sciences:
Climate, Atmospheric Sciences: Meteorology*

Mentor: Lynn McMurdie, Atmospheric sciences

Mentor: Angela Rowe, Department of Atmospheric Sciences

Mentor: Joseph Zagrodnik, Atmospheric Sciences

From November 2015 through March 2016, the Olympic Mountains Experiment (OLYMPEX) field campaign was conducted on the Olympic Peninsula to study how winter-time precipitation is modified as it passes over coastal mountains and to validate satellite-derived precipitation measurements from the U.S.-Japan Global Precipitation Measurement (GPM) mission. This project uses OLYMPEX data to explore the topographic effect on these Pacific frontal systems by examining cloud and precipitation structure on the leeward side (usually northeast) of the Olympic Mountains, where there is typically a minimum in precipitation relative to the windward side. While most research has focused on the structure of the windward side, this study uniquely examines the leeward side of the mountains. A radar managed by Environment and Climate Change Canada on Vancouver Island provided measurements of the vertical structure of the frontal systems over the northern Olympic Mountains, including intensity inferred from radar reflectivity. Using environmental data from NCEP North American Regional Reanalysis on the windward side (usually southwest) of the mountains, this study classifies the leeward radar data based on upstream synoptic conditions. It then examines the cloud and precipitation structure on the leeward side of the mountains in various atmospheric environments. Preliminary findings of this study reveal, for example, that the intensity of cloud systems on the leeward side is dependent on upstream stability. Locally, these findings will inform studies of snowpack and water supply as many reservoirs depend on precipitation that occurs on the leeward side. Outside of the Pacific Northwest, these findings can be applied to other midlatitude coastal mountain ranges on the west side of continents around the world.

SESSION 2A

STRENGTH AND IDENTITY: CHALLENGING DOMINANT NARRATIVES

Session Moderator: Holly Barker, Anthropology

MGH 171

3:30 PM to 5:15 PM

* Note: Titles in order of presentation.

How Do Asian Americans Reclaim Their Identity from Controlling Ideologies through Hip Hop?

Bianca Recuenco, Senior, Communication

UW Honors Program

Mentor: Ralina Joseph, Communication

Hip hop is both a globalized movement and culture that gives marginalized community members an outlet to express themselves creatively. The hip hop community posits itself as one that welcomes individuals based on one's credibility through the four pillars: rapping, DJing, breakdancing, and graffiti art. However, despite the "openness" the industry pushes forth, an individual's race and gender, especially not being a Black, heterosexual male, complicates one's access to opportunities. Asian Americans, in particular, must simultaneously subvert and reclaim their identities from controlling ideologies through their navigation of hip hop. In this study, I conducted a semi-structured focus group with Asian American hip hop artists from the greater Seattle area (all ranging in age). I conducted individual follow-up interviews with participants, utilizing a narrative inquiry methodology. The combination of the focus group and individual interviews enables me to outline the richness of participants' hip hop experiences. My preliminary findings indicate that Asian Americans must not only face impositions by mainstream media outlets but also within the liminal spaces of hip hop. Renegotiations and reaffirmations of identity prove critical for Asian Americans because they correspond to a liberation from racialized and gendered scripts. Moving forward, one implication of this study is the limited scope of Asian ethnic representation within all four of the pillars of hip hop, and the need for Asian Americans to redefine themselves within hip hop.

SESSION 2H

CENTERING OUR VOICES

Session Moderator: Ralina Joseph, Communication

MGH 251

3:30 PM to 5:15 PM

* Note: Titles in order of presentation.

The Effects of Limited Representation of African American Males in Higher Education

Marvin Lee Marshall, Senior, Communication

UW Honors Program

Mentor: Ralina Joseph, Communication

While the population in America is becoming more and more diverse, the faculty that train our future workforce are not. At predominately white institutions (PWIs) across the United States, racial disparities amongst faculty are problematic. As of 2015, African Americans made up approximately 12.7% of the United States population. At that same time, male and female African American full-time faculty at degree granting college institutions made up only 3% of the workforce. With inadequate representation of African American male faculty, there are voids in the bonding experience between a student and professor. This study critically examines the limited representation of African American men in higher education, and the effects such representation might have on students and faculty, particularly regarding mentoring opportunities. The implications of racial disparities in higher education have been explored through in-person, semi-structured interviews with African American faculty members, graduate students, and undergraduate students. The results of this project have shown that the lack of representation amongst African American male faculty is negatively impacting the college experience for not only students but also staff at PWIs. This research has gained a better understanding of the importance of mentoring and the effects of limited representation and has added to the overall conversation regarding African Americans males in higher education.

POSTER SESSION 3

Commons West, Easel 43

2:30 PM to 4:00 PM

Intrusive Questions about Black Hair and How They Affect Black Women's Self-Esteem and Confidence

Kpojo Kparyea, Senior, Communication (Journalism)

UW Honors Program

Mentor: Ralina Joseph, Communication

Black women are known to wear their hair in different ways from braids and locs to weaves and wigs. Black hair is a way of expression and a lot of thought goes into the process and maintenance of black hair. Early African civilizations used hair as a signifier for their wealth, rank, religion, and marital status and the Afro hair was seen as a political symbol for black power and self-love. Hair is so important to black women that a 2016 Perception Institute research found that black women reported spending more on their hair and booking more professional hair appointments than white women. And while our hair means so much to us, it remains a mystery to many non-black people and so we become the objects

of inquiry: we are constantly fielding questions about our hair. I examined the ways in which questions like: “can I touch your hair?”; “how often do you wash your hair?”; and “is your hair real?”, affected black women’s self-esteem and confidence. The study first established what was an intrusive question and the historical and political implications of black hair. Through a focus group with 10-15 black women ages 18-24 along with follow-up interviews with some of them, the study highlighted some of the experiences young black women have faced about their hair and the impact of the intrusive questions on how they viewed themselves. I expected the focus group to reveal that those intrusive questions left black women feeling uncomfortable, inauthentic or fake, and stopped them from frequently changing their hairstyles.

was increased till Day 7, when peak mRNA levels were observed, and decreased thereafter. In conclusion, the present study is a first step in establishing a working model to investigate human liver development in vitro.

POSTER SESSION 4

Balcony, Easel 92

4:00 PM to 6:00 PM

Modeling the Hepatic Ontogeny of Epigenetic Gene Expression in HepaRG Cells

Yasmin Kaori Everson, Senior, Environmental Health

Mentor: Julia Cui, Environmental and Occupational Health Sciences

Mentor: Joseph Dempsey, Environmental and Occupational Health Sciences

During development, profound changes occur in the liver from a hematopoietic organ to a major organ for xenobiotic biotransformation. Developmental regulation of epigenetic modifiers, such as factors involved in DNA methylation and histone modifications, may modify the transcriptional output of drug-metabolizing enzymes. The goal of this study was to develop an in vitro model to recapitulate human liver development using HepaRG cells and implement this model in investigating the developmental regulation of epigenetic modifiers and drug-metabolizing enzymes. Previously, HepaRG cells were maintained in proliferative phase and were tested up to 14 days at fully differentiated stage. In this study, we collected cells during differentiation from 0 to 14 days, and isolated total RNA for RT-qPCR of epigenetic modifiers and drug-metabolizing enzymes. Among a panel of 92 epigenetic genes, there were 52 genes differentially regulated at earlier time points as compared to the fully differentiated stage. Most of these epigenetic modifiers increased during differentiation and reached a plateau either at Day 7 or Day 14; whereas the class II major histocompatibility complex transactivator (CIITA), which has an acetyltransferase domain, gradually decreased during differentiation. The adult hepatocyte marker albumin gradually increased and reached a peak at Day 7, which decreased thereafter. The mRNA of the fetal-specific drug-metabolizing enzyme cytochrome P450 3A7 (CYP3A7) was high between Day 2 and Day 3 but decreased rapidly thereafter. Conversely, CYP3A4 mRNA