

MSU AGEP Science Today Bulletin Fall 2020

Alliance for Graduate Education and the Professoriate (AGEP)
Michigan State University, East Lansing, Michigan
Volume 8 Issue 1

Letter from the Editors

We are excited to present the 2020 AGEP *Science Today* Bulletin. This edition showcases the wealth of interdisciplinary scientific research conducted by the AGEP community at Michigan State University (MSU). The year 2020 has been a dystopic kind of year, especially amidst anti-Black violence, transphobia, COVID-19, Nigeria's Special Anti-Robbery Squad (SARS), the ongoing presidential election, and perpetual calamity in myriad forms. This year's bulletin is purposed, and evidence of what good can emerge from crisis. As you learn from the various authors included in our fall issue, you may agree there is no panacea for improving society, the environment, or world. Instead, it is through the *collective* effort of diverse people working in distinct fields to further their area of praxis, research, and theory. It is our belief that our combined effort will help construct a new world, rooted in interdependency and generosity.

This 8th edition also features stories and conversations with researchers who are at various stages of their careers in science. We have an invited research brief from a MSU Summer Research Opportunities Program (SROP) alum and pieces featuring conversations with an AGEP alumna and a faculty member at MSU. By covering the nuances and subtleties of their stories, we portray careers in science more holistically, with a sincere desire to expand our understanding of what is possible in the sciences and humanities for the next generation of scholars.

To our readership and AGEP community, we thank you for your continued support. We have enjoyed putting together the Bulletin and showcasing the impressive work and experiences of our members. We hope that the Bulletin can make the humanities and sciences more accessible to all and increase discourse in quotidian communities. We have had a rewarding experience as Editors, and undoubtedly know that the Bulletin will continue to foster a community of scholars at the vanguard of interdisciplinary work and innovation.

Sincerely,
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On the COVID-19 Frontline: Mental Health, Coping, and Barriers to Treatment among China's Wuhan Health Care Workers

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Keywords: first responders, mental health, COVID-19, health care workers, China, stress

Introduction

In December 2019, Wuhan (Hubei, China) had the first outbreak of the novel coronavirus (COVID-19), which became a worldwide pandemic. Health care workers across China went to Hubei to respond to this large-scale public health crisis. These frontline workers experienced more severe mental health outcomes than those who worked outside the province (Lai et al., 2020); however, most denied having psychological challenges and did not use resources when offered (Chen et al., 2020). This observation raised concerns that frontline health care workers' mental health needs have not been adequately addressed (Xiang et al., 2020). The objective of this study was to investigate challenges, mental health symptoms, sources of strength and coping strategies among frontline healthcare professionals working in the Hubei COVID-19 outbreak.

Methods

Medical professionals ($N = 23$) who went to Hubei during the COVID-19 outbreak completed a semi-structured interview about their experiences in Hubei and use of mental health resources. Participants hailed from eight hospitals and centers for disease control and prevention, were primarily female (82.6%) and averaged 34.6 years of age ($SD = 4.76$). Participants were interviewed while in a 14-day quarantine immediately following their return from Hubei. Interviews were recorded, conducted in Mandarin via telephone by a certified psychotherapist and transcribed. Thematic analysis was used to analyze data. Two researchers fluent in Mandarin independently coded transcript themes with substantial initial agreement ($\kappa = .72$). To resolve discrepancies, coders discussed the transcripts and clarified code definitions until consensus was reached. The project was approved by the Institutional Human Research Ethics Board.

Results

Participants described challenges posed by their work conditions, such as not having essential Personal Protective Equipment (PPE), long and stressful work shifts, and complicated and rapidly changing procedures to follow. Although some denied any distress ($n = 7, 30.43\%$), the vast majority reported physical and psychological symptoms (e.g., physical discomfort,

anxiety, sleep disturbances). Sources of strength that supported them during their time in Hubei included feeling responsible for patients and trusting the medical system (Table 1). A

third to less than half (30.43% to 39.13%) of the participants mentioned being aware of some mental health resources available to them. None of the participants who were aware of mental health resources offered to them reported using these resources (See Table 2 for reasons), which is consistent with past findings (Chen et al., 2020). When asked whether they would use mental health support in the future, only 6 (26.09%) said they would, and others cited reasons such as their self-care being sufficient or their distress symptoms not being significant enough to seek care. To cope, most relied on methods of social connection, such as talking with friends. Less than half of the participants endorsed using any particular type of support, including teletherapy or counseling (Table 2), to cope with future psychological needs.

Discussion

Despite calls for more support for COVID-19 health care workers (Lai et al., 2020; Xiang et al., 2020), this study is among the first to examine their self-reported challenges, mental health symptoms, and strengths, particularly for those at the epicenter of the pandemic. Although the vast majority of participants reported physical and psychological health symptoms, none of them had used services available to them and few said they would consider doing so in the future, similar to other studies of first responders (Lanza et al., 2018).

Future Work

Future work should examine the long-term impacts of working at the COVID-19 frontline on health care workers. While it is possible that participants' coping strategies and resilience allow them to manage their symptoms, trauma-related symptoms may begin or worsen over time (Carty et al., 2006), making it important that frontline medical professionals receive psychoeducation about delayed-trauma responses and future access to resources. Given the barriers to seeking services identified, psychoeducation is also needed to combat beliefs about which symptoms warrant mental health care, the impact of mental health stigma, and the ways in which status as health care workers can complicate their willingness to seek help when needed.

Broader Implications

Daily increases of COVID-19 cases reflect exponential growth in many regions around the globe, further straining health care systems and the health care workers that staff them. Our findings highlight that even in the face of psychological and physical health consequences, these workers may not seek the care they need, which may impact their ability to effectively provide health care on the frontlines. Given this reality, it is imperative that we prioritize and remove barriers to seeking such services for health care workers.

Acknowledgement: This project was supported by an Early Start research fellowship awarded to Ruofan Ma from Michigan State University.

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Tables

Table 1. Challenges posed by work conditions, psychological symptoms, sources of distress, and sources of strength

Themes	Number (% out of N = 23) of Endorsement
Challenges	
Long and/or busy work hours	14 (60.87)
Difficulties related to Personal Protective Equipment (PPE), including limited amount and significant discomfort from using them	9 (39.13)
Complicated procedures and rules to follow	4 (17.39)
Rapid changes	4 (17.39)
Symptoms and Sources of Distress	
Sleep disturbance	14 (60.87)

General anxiety or fear	14 (60.87)
Physical discomfort	9 (39.13)
Worrisome or ruminative thoughts	8 (34.78)
Worry about contraction with COVID-19	7 (34.43)
Concerns for colleagues	4 (17.39)
Worry about passing out at work	4 (17.39)
Reduced appetite	3 (13.04)
Affected by others' emotions or conditions (e.g., from seeing colleagues passing out at work)	3 (13.04)
Anxiety from facing rapid changes	3 (13.04)
Worry about family back home or feeling homesick	2 (8.70)
Worry about inconveniencing or creating work for others	2 (8.70)
<hr/> Sources of strength <hr/>	
Sense of mission and responsibility	7 (30.43)
Trust for the medical system	6 (26.09)
Camaraderie with colleagues	6 (26.09)
Feeling cared for by supervisors, institutions and/or the country	5 (21.74)
Gratitude from people in Hubei	4 (17.39)
Support and encouragement from family and/or friends	3 (13.04)

Table 2. Reasons for using or not using professional mental health support, participant coping strategies, and preferences about follow-up support

Theme	Number (% , out of N = 23) of Endorsement
Awareness of mental health resources	
Psychological assistance hotlines	9 (39.13)
Local counselors or psychotherapists	7 (30.43)
Online consultation groups	7 (30.43)
Use of mental health resources	
Would use the resources if in need	6 (26.09)
Not having used because self-care or self-help is sufficient	17 (73.91)
Not having used because professional support is for more severe distress	17 (73.91)
Worry about increasing workload for the mental health service providers	2 (8.70)
Feeling talking with strangers about mental health concerns is intrusive	2 (8.70)
Coping strategies	
Talking with friends and/or colleagues	15 (65.22)
Calling family	11 (47.83)
Exercise	7 (30.43)
Keeping self busy with work	5 (21.74)
Participating in group activities	4 (17.39)
Using entertainment media	4 (17.39)
Talking with supervisors	2 (8.70)
Waiting it out	2 (8.70)

Preferred modes of mental health support after returning	
One-on-one counseling by phone calls	10 (43.48)
Group activities	5 (21.74)
Not sure and/or don't think it will be needed	4 (17.39)
One-on-one and in-person counseling	2 (8.70)

The Intersection of Race and Sexuality in a National Sample: Examining Discrimination and Mental Health

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Keywords: LGB, sexuality, race, discrimination, mental health

Introduction

Literature on the mental health of queer people of color (QPOC) offers contradictory results. Some findings suggest that multiple minoritized identities are at higher risk for increased encounters of discrimination and thus heightened lifetime stress, aligning with theories like multiple jeopardy¹ and minority stress theory.^{2,3} Other findings suggest that coping strategies POC develop in the face of racial discrimination may translate to combating heterosexism as a QPOC later in life.⁴ In the United States, more than eight million adults identify as lesbian, gay, or bisexual (LGB) and that number increases when accounting for behavior and attraction.⁵ Research addressing the public health needs of QPOC is critical because race- and sexuality-based minoritization is linked to multiple deleterious consequences. The current study assessed how racial and sexuality-based discrimination impacts anxiety and depression symptoms in QPOC individuals and how racial identity and social support may be potential protective factors.

Methods

This project used data from the National Institute on Alcohol Abuse and Alcoholism's National Epidemiologic Survey on Alcohol and Related Conditions-III (NESARC-III). This study focused on a subset of 2,335 participants that either identified as LGB, reported any LGB attraction, or any LGB sexual behavior in the past year. Participants reported experiences of discrimination based on race, sexuality, and ethnicity. Depression and anxiety symptoms were measured by the diagnostic criteria according to the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition. Over half of respondents reported zero experiences of racial or sexuality-based discrimination, and zero anxiety or depression symptoms. A zero-inflated Poisson model (ZIP) was used to accommodate the zero-inflated outcome variables. The ZIP model approximates two distinct models, a logistic regression predicts an odds ratio for reporting zero, and a Poisson regression predicts a rate ratio among those that reported any response greater than zero.

Results

This study examined the effects of racial- and sexuality-based discrimination on anxiety and depression in QPOC individuals. All POC results are outcomes in comparison to their White counterparts. All POC groups had an increased likelihood of reporting racial discrimination. Sexuality-based discrimination increased for Black and Latinx individuals and decreased for Indigenous individuals. Overall, POC groups did not report higher rates of anxiety or depression.

Despite racial discrimination having a significant positive effect on depression in general, the odds of reporting no depression symptoms increased for both Black and Latinx groups when examining the interaction effect of race and racial discrimination on depression. No racial differences were found for racial discrimination and anxiety. The interactive effect of race and sexuality-discrimination on depression showed that despite sexuality-discrimination having a significant positive effect on depression in general, the odds of reporting zero depression increased for Black individuals. No racial differences were found for sexuality discrimination and anxiety.

Social support was the only protective factor associated with fewer symptoms for Black individuals that reported any depression or anxiety symptoms.

Discussion and Limitations

Despite experiencing more discrimination, the QPOC in this group evidenced fewer symptoms of depression and anxiety compared to White individuals. This may support the idea of POC family members as models of resilience contributing to developing resilience that can be protective when also marginalized by sexuality.⁴ The overall lower levels of depression and anxiety symptoms were inconsistent with literature that often compares the mental health of LGB to heterosexuals. It is well documented that higher levels of identity-based discrimination and violence is associated with increased risk of suicide and detrimental to mental health. The present study findings are indicative only of low levels of discrimination.

Limitations to this study include several measurement issues. Gender was not examined due to the problematic way it was measured as a binary option recorded by the interviewer. The low levels of discrimination in this sample may be due to the measure merging multiple types of discrimination into individual questions. Further, face to face interviews may have affected individual responses, particularly when talking about sensitive topics such as mental health and discrimination.

Future Work

Next steps include collecting qualitative and quantitative data that utilizes a more accurate measure of discrimination, mental health impacts, and resilience factors specifically for QPOC. Data measures need to capture systemic forms of oppression in addition to interpersonal experiences. Other mental health outcomes need to be assessed to better understand the impact of discrimination.

Broader Implications

The association of social support with decreased symptoms of anxiety and depression in Black individuals implies that identity-based support groups and community centers may play an important role in supporting the mental health of QPOC communities.

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Mind over Racism: How Does Trait Mindfulness Protect against Racism?

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Keywords: racial discrimination, mindfulness, race-based rejection sensitivity, stress and coping, Asian/Asian Americans

Introduction

The current study examines the relationship between trait mindfulness (i.e., *purposefully focusing on the present without judgment*), racism, and racism sensitivity among Asians/Asian Americans – asking, does mindfulness mitigate the negative effects of racism? Racism is detrimental to ethnic minorities' physical and mental health (Pascoe & Richman, 2009). Theories suggest that greater racism sensitivity, compounded by cumulative stress associated with experiencing racism, increases ethnic minorities' health risk. Trauma models of race-related stress suggest that experiencing racism results in a heightened awareness of racism (i.e., race-based rejection sensitivity; Mendoza et al., 2002), which can contribute to worsened mental health (Wu, Lyons, & Leong, 2015). To date, research has yet to examine factors that influence how previous experiences of racism impact future race-based rejection sensitivity among Asians/Asian Americans. However, evidence suggests that trait mindfulness may buffer the effects of racism.

In psychology, mindfulness involves paying attention to internal (e.g., thoughts and emotions) and external events (e.g., sights, sounds, feelings) purposefully and without judgment (Kabat-Zinn, 1994). Those with higher levels of trait mindfulness maintain greater compassion and empathy towards self and others by having fewer critical thoughts, which encourages acceptance and reduces avoidant behaviors based on anxiety, fear and worry. A recent study found that trait mindfulness buffered the effects of racial discrimination on anxiety for Black/African Americans (Graham, West, & Roemer, 2013); however, it was unclear which aspects of mindfulness were responsible for the buffering effects. Thus, the current study examines how five aspects of mindfulness (i.e., *describing* or putting words to one's thoughts, *observing* one's experience, acting with *awareness*, *non-judgment* of one's experiences, and *non-reactivity* to one's experience) moderate the relationship between perceptions of racism and race-based rejection sensitivity. The current study is a first step in examining how specific aspects of mindfulness aid in coping with race-related stressors for ethnic minorities.

Methods

Asian/Asian American students ($n = 145$) aged 18–26 years old ($M = 19.84$, $SD = 1.75$) completed online self-report questionnaires via the psychology subject pool for course credit. Participants were predominantly female ($n = 93$), heterosexual (94.1%) and spoke English as their primary language (66.2%). A slight majority were international students (55.2%). The questionnaire included the Five Facet Mindfulness Questionnaire (FFMQ), Rejection Sensitivity Questionnaire – Race (RSQ-R), Subtle and Blatant Acts of Racism – Asian Americans scale (SABR-A2), Cognitive Flexibility Scale (CFS), and the Emotion Regulation Questionnaire (ERQ).

Analysis and Results

A moderated multiple regression was conducted to test which facets of mindfulness moderate the relationship between racism (SABR-A2) and race-based rejection sensitivity (RSQ-R). The CFS, ERQ, and demographic variables were included as covariates to examine the effect of mindfulness over and above other coping strategies and sample demographics.

Results indicated that mindfulness buffered the effect of racism¹. Specifically, the *describing* (i.e., putting words to thoughts) x racism interaction term was significant, $b = -2.57$, $SE = 0.85$, $p = 0.003$, $\Delta R^2 = 0.07$. Simple slopes analysis revealed significant main effects of racism on race-based rejection sensitivity at both high and low levels of *describing* ($\pm 1 SD$). More specifically, racism-based rejection sensitivity decreased as *describing* increased for those who reported high and low levels of racism; however, the benefits of *describing* were greater for those who experienced high levels of racism.

¹Contact first-author (wuivan@msu.edu) for full-results.

Future Work

The current study demonstrates that the *describing* facet (i.e., putting words to thoughts) of mindfulness buffered the effect of racism on race-based rejection sensitivity. Given findings that trait mindfulness can be enhanced, future studies should refine brief mindfulness-based interventions to increase trait mindfulness and assess their ability to buffer other types of adjustment-related stressors (e.g., homesickness, and language difficulties) among international students. In particular, intervention using mobile phone applications show promise. Similarly, brief sessions during campus orientation could train students in mindfulness and self-compassion-based techniques to promote international students' psychological well-being at the beginning of their college career.

Broader Implications

The current study is among the first to demonstrate the protective effects of the *describing* facet of mindfulness against racism and race-based rejection sensitivity. As the number of international students in the United States increases, institutions must consider preventative measures that facilitate cultural transition and psychological adjustment. Findings from this study point to the promise of mindfulness training in preparing international students, and potentially non-student immigrants, for the cultural adjustment process in the U.S., including experiences with racism, and may be effective for other ethnic minority college students coping with similar events. Nevertheless, campus initiatives must continue to increase cultural sensitivity and awareness to reduce prejudice and discrimination against international, racial and ethnic minority students.

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Is Normalcy or Solidarity More Effective in Reducing Mental Health Stigma?

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Keywords: stigma, normalcy, solidarity

Introduction

Stigma is defined as a perceivable attribute that discredits and taints one's social identity (Klik et al., 2019). Though the attribute is not necessarily dangerous, society generally views the characteristic as inferior or unacceptable (Klik et al., 2019). Mental illness can be seen as a stigma, and people with mental illness face many challenges as a result, such as inequitable job opportunities and inferior health care. Treating people with mental illness differently shows stigmatized behaviors, which leads to those with mental illness experiencing these types of discrimination. Mental illness is associated with a variety of negative stereotypes, including being dangerous, dirty, unpredictable, worthless, weak, and ignorant (Klik et al., 2019). Believing in these stereotypes would show that the person holds stigmatizing attitudes against those with mental illness. It may also show that they have stigmatized knowledge of mental illness and poor understanding of the reality of mental illness. Mental illness stigma campaigns, designed to reduce mental health stigma, focus on educating people about mental illness and inspiring others to offer support to those with mental illness. These campaigns aim for one of two goals: normalcy or solidarity. Normalcy is about accentuating the similarities between people with mental illness and people without mental illness and attempts to make the abnormal, normal (Corrigan, 2016). Normalcy messages typically include facts that challenge myths about a given condition and are associated with promoting a better understanding of illnesses and treatments (Corrigan, 2016). In contrast, solidarity messages promote accepting differences. The core of solidarity is getting the in-group to stand with the out-group. As empowerment is an essential part of overcoming mental illness, feeling supported is necessary to resolve any mental health problems (Corrigan, 2016). The degree to which normalcy and solidarity independently reduce stigma is unknown (Corrigan, 2016). This study is aimed at comparing the effects of normalcy and solidarity messaging by measuring stigmatizing attitudes, stigmatizing behaviors, and stigmatizing knowledge.

Methods

The current study compared the effects of normalcy-focused and solidarity-focused interventions with 114 undergraduates (57 received the normalcy-focused intervention and 57 received the solidarity-focused intervention). Each intervention was a six-minute Ted-Talk of a person with mental illness speaking about their experiences. The videos were similar in educating viewers about mental illness and stigma but differed on whether they talked about normalizing mental illness (normalcy condition) or talked about supporting and accepting mental illness (solidarity condition). Participants completed a survey before and after viewing the intervention video to measure changes in attitudes toward mental illness. Three scales were used in the surveys, the Community Attitudes Toward the Mentally Ill (CAMI) was used to measure stigmatizing attitudes (Taylor & Dear, 1981), the reported and intended behavior scale (RIBS) was used to measure stigmatizing behaviors (Evans-Lacko, Rose, Little, Flach,

Rhydderch, & Thornicroft, 2011) and the mental health knowledge scale was used to measure mental health knowledge (Evans-Lacko, Little, Meltzer, Rose, Rhydderch, Henderson & Thornicroft, 2010). Various paired t-tests were conducted to compare results. The group in the normalcy condition saw significant changes in stigma attitudes, $t(56) = 2.18$, $p < .05$. The normalcy condition did not produce significant results for knowledge ($t = -0.63$ and $p = 0.53$) or behavior ($t = -1.78$ and $p = 0.08$). The solidarity group saw significant changes in knowledge, $t(55) = -2.8508$, $p < .05$, and behavior, $t(55) = -2.7262$ and $p < .05$. This group did produce significant changes for the stigma measure ($t = -1.52$ and $p = 0.13$).

Results

These results suggest normalcy is more effective in changing attitudes. This is most likely because normalcy is centered around providing facts that contradict stereotypes. However, normalcy was not as effective in changing behavior as the solidarity messaging, which centered around support and acceptance. Both messaging types changed the knowledge measure with an unpaired t-test showing that the groups ended up at a similar knowledge level [$t(109) = 0.42$, $p = .6778$], although the change in knowledge of the solidarity group was larger in magnitude because that group started off lower on the knowledge scale. Based on these results, there is not a clear answer regarding which is better at reducing stigmatizing attitudes given that stigma was similarly reduced on all scales across both groups. This shows that normalcy and solidarity messaging both ultimately achieve the goal of reducing stigma. However, determining which to use moving forward is complicated. Normalcy messaging did change attitudes more effectively, however, if it does not change stigmatizing behaviors the stigmatized group would still experience discrimination. Additionally, this study group was limited, as it was pulled from college students and potentially contained many like-minded people with similar backgrounds. More research needs to be done with a wider variety of people to see if a difference in background and education changes the outcomes. This study offers a first step toward determining whether normalcy or solidarity messaging have different impacts and benefits in reducing mental health stigma.

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A Mixed Methods Project on Community Academic Partnerships in Public Health Equity

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Keywords: public health equity, community academic partnerships, mixed methods

Background

A systems approach to public health challenges in underserved communities requires the use of community-academic partnerships (CAPs)—partnerships extending beyond academic boundaries to translational research in real-world settings—to better address health disparities (1). Public health needs a call for greater community participation and control in processes that define community problems, and design and implement interventions that are both meaningful and feasible within the community (2). Building on existing community assets, CAPs, as implementation strategies, can support and enhance the capacity of existing community-based initiatives and evidence-based programs to meet public health needs more effectively (3,4). Yet, the ways in which CAPs work to benefit the community and best practices for collaboration remain understudied. The current project is a longitudinal, sequential explanatory mixed methods research design that explores a CAP centered on public health equity efforts in an urban city in the Midwest region.

Data and Methods

The research questions guiding this study aim to understand *WHAT* and *HOW* factors facilitate or hinder the development of CAPs, along with partners' motivations to participate with CAPs. Twenty-eight participating agencies within a CAP were recruited for Phase 1 data collection. Phase 1 eligibility criteria included: (a) be a key representative in a participating agency in the partnership; (b) read and speak in the English language; and (c) be 18 years of age or older. Key representatives were members who attended meetings, completed evaluation assessments, and acted as site facilitators to communicate between their affiliated universities and/or community agencies. Participants were provided a \$15 incentive for participation in the survey and interview Phase 1 data collection. Phase 2 data collection is underway.

The PARTNER Tool—a social network analysis tool and data collection platform—was adapted and used to collect data on (1) facilitators and barriers; (2) partners' motivations to participate; (3) demographics; (4) perceived goals; (5) perceived success; (6) trust; (7) perceived value; and (8) network metrics. Efforts were made to incorporate community context into instrument design. A semi-structured interview protocol was then developed to expand on quantitative results, eliciting more details about partners' experiences with the CAP and any suggestions for improving the collaboration.

Data Analysis Plan

For the quantitative phase, social network analysis (SNA) was used to create visual sociograms to depict the nodes, representing partnered agencies, and network ties, conveying the links between multiple pairs of nodes within the network (5). These outputs help assess the overall

structure of the network. Additional exploratory analyses (e.g., means, t-test, and correlations) were used to identify any significant relationships between network metrics and CAP characteristics. The sociogram provided an overview on how agencies within the CAP are interacting, highlighting where interactions are predominantly occurring, and how organizational attributes (e.g., type of agency illustrated by) are related to frequency of ties. The qualitative data collection phase remains underway. Qualitative data will be analyzed using directed content analysis, a widely used, flexible qualitative approach (6,7). Once transcriptions of interviews are completed, codes will be quantized to present ever-coded (e.g., the number of transcripts that had the code assigned ever) and frequency (e.g., the number of times the code was assigned throughout all of the transcripts) counts, which provide additional data to support the salience of the emergent themes (6,7). All interview transcripts will be entered, coded, and analyzed in MAXQDA.

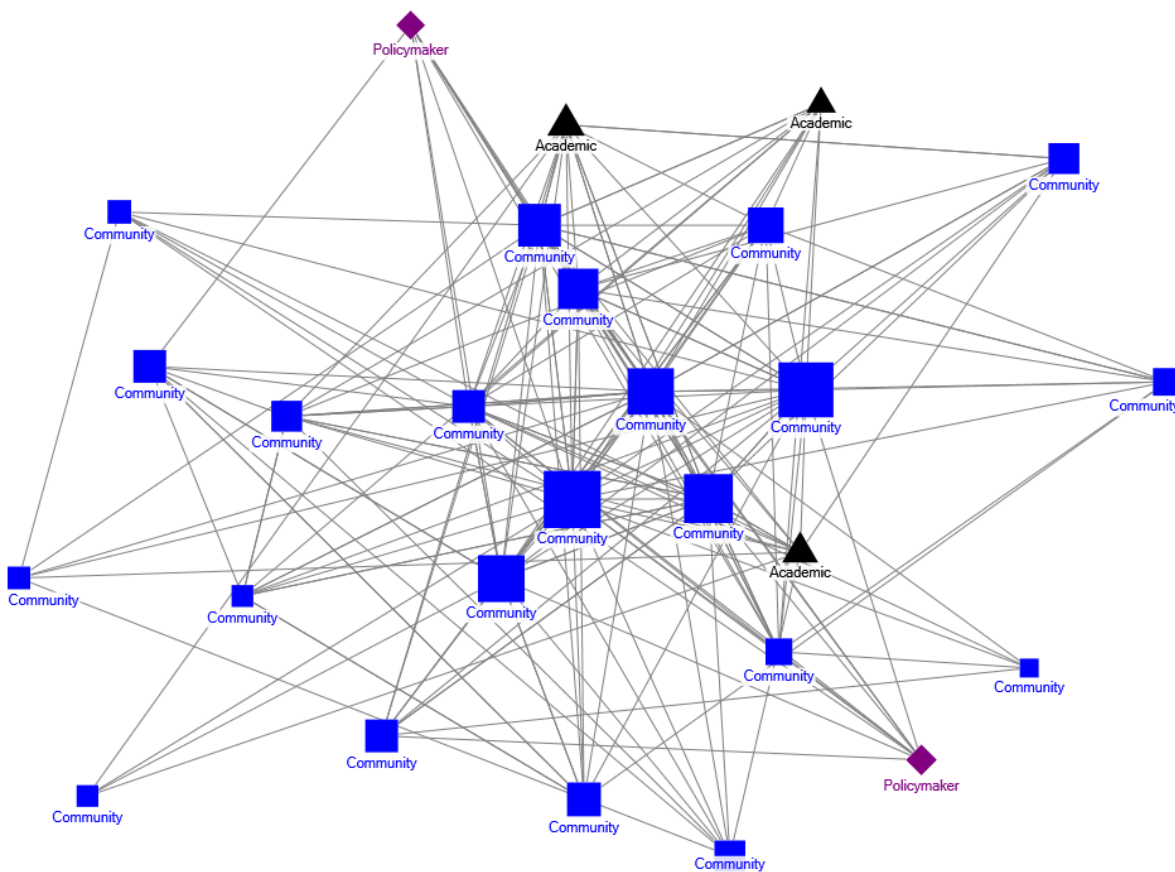


Figure 1. Example of a sociogram illustrating all connections between community, academic, and policy makers that make up the CAP.

Implications

Through the use of both quantitative and qualitative approaches, results are expected to provide an in-depth assessment of factors that contribute to or hinder the growth of networks in CAPs, along with the perspectives of community partners, including motivation to participate and partner perspectives (10,11). A longitudinal approach to CAPs also provides the opportunity to assess the temporal aspect of partnerships, providing an overview on how

dynamic contexts might change over time. Findings will ultimately contribute community and academic perceptions of collaborative efforts in CAPs to highlight how community-based efforts are dynamic processes, intertwined with contexts related to community, resources, interpersonal connections, power, and equity.

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Are They Receiving Quality Healthcare through School-based Health Centers at Predominantly White Institutions?: Perspectives of Graduate Women of Color

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Keywords: healthcare, race/ethnicity, gender, post-secondary education, school-based health centers, qualitative research

Introduction

Women of Color (WOC), which can include American Indian or Alaska Native, Hispanic/Latinx, and African American, disproportionately experience increased rates of obesity, heart disease, HIV infections, and death at childbirth, among other health conditions (Highlights from Women of Color Health Data Book, 2014). As the well-being of WOC is impacted by various health issues, it is crucial that they have access to quality healthcare. It is important to note that access to healthcare services does not imply the healthcare received is of quality. Healthcare quality is defined as “care that is safe, effective, patient-centered, timely, efficient, and equitable” (Institute of Medicine, 2001). Women often delay seeking healthcare and/or experience inconsistent quality healthcare which may result in changing providers (Shaw et al., 2017). Additionally, WOC experience more discrimination, prejudice, and exclusion due to skin color and language (Sorkin, Ngo-Metzger, & De Alba, 2010) which may further impact their ability and decision to seek out healthcare.

WOC at predominantly white institutions (PWI) likely face negative experiences throughout their graduate education, such as racial stereotypes and low institutional value for racial diversity (Curtis-Boles, Chupina, & Okubo, 2020). Black women in particular experience negative institutional racial stigma more often than White women and other WOC (Leath & Chavous, 2018). However, it is unknown whether these negative racial stigmas affect the perceived quality of healthcare WOC receive at their school-based health centers (SBHCs). SBHCs were originally developed to improve children’s and students’ access to healthcare and provide both primary medical care and mental health services. Much of the literature on SBHCs focuses on the experiences of minority and/or low-income youth from kindergarten through 12th grade and have overlooked the undergraduate and graduate student populations. This study addresses this gap in knowledge and gathers perspectives of Women of Color who are graduate students at PWIs on whether they receive quality healthcare through their SBHCs. Specifically, we ask:

1. Do graduate Women of Color perceive their healthcare to be quality at their school-based health centers?
2. Do graduate Women of Color experience racial stigmatization when receiving healthcare through school-based health centers?

3. How do graduate Women of Color's perspectives of their healthcare quality impact their likelihood of returning to their same medical provider?

We hypothesize:

1. WOC will perceive their healthcare quality to be unsatisfactory;
2. WOC will experience racial stigmatization when seeking healthcare; and
3. WOC's experiences in SBHCs will influence the likelihood of returning to their same medical provider.

Methods

This exploratory, qualitative study will use a narrative research approach to explore Graduate WOC's perception of what quality healthcare looks like to them, and whether they received this care when visiting their SBHC. Our goal is to put forth the voices and experiences of WOC and take a critical feminism epistemological approach to center the voices of WOC in this study.

Data Collection

Using a convenience sampling method to converse with at least five graduate WOC from five different PWIs across the U.S., we will follow a semi-structured interview protocol that would ask the following questions:

1. When you hear the phrase 'quality health care,' What do you think of?
2. As a woman of color, do you feel valued when visiting your school-based health center?
3. Do you feel satisfied with the quality of healthcare you receive at your institution?

Anticipated Results & Implications

Based on previous studies of women's healthcare, we anticipate WOC will perceive the healthcare received at their SBHCs to be of quality in some areas; experience racial stigmatization when receiving healthcare through the SBHCs at PWIs; and perceive their healthcare providers' identities to contribute to WOC's likelihood to return to their same medical provider. Addressing underlying racial/ethnic and gender stigmas for women's healthcare may inform future healthcare and education policies to better serve graduate WOC. Studies have indicated that WOC make up a small percentage of those who obtain graduate degrees, and there are various barriers that contribute to this. Their health and well-being may be an additional barrier to achieving graduate degrees when quality healthcare is low. Therefore, this paper could inform research, policy, and practice to improve their overall well-being, quality of healthcare received, and further develop resources that may positively impact the completion of graduate degrees.

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Turnout: A Needs Assessment of Disempowering Forces in Behavioral Health Service Attendance

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Keywords: needs assessment, intersectionality, community mental health, service attendance, behavioral health

Objective

Using data from a Michigan community mental health center program, we will assess the degree to which social and demographic characteristics relate to service attendance and non-attendance with the goal of assessing who is showing up, who is not, and what affects turnout.

Introduction

Over the last 300 years, behavioral health (BH) policy has come full circle. People with BH needs were treated in their community by family members, then in restrictive institutions. Now, they are back in the community reliant on supportive community services. John F. Kennedy's 1963 Community Mental Health Act ushered a public policy focus onto BH concerns and laid the groundwork for the Affordable Care Act and the Mental Health Parity and Addictions Equity Act. Although, BH access remains fragmented and out of reach across the U.S. Moreover, those who do access services are predominantly educated, middle class, and urban dwelling, suggesting barriers to care for those who are impoverished, ruralized, and marginalized (Hannaway, 2008).

In Michigan (MI), a 2019 BH report found that of 9.9 million citizens, 1.76 million live with diagnosable mental distress and 638,000 with substance dependence. Yet, 38% of people with diagnosable mental distress and 80% of people struggling with substances do not access services (Altarum, 2019). Conceiving access to BH as a public health issue, a community mental health center (CMHC) in MI developed a program to eliminate service access disparities with a centralized hub people call for BH services. By centralizing screening, referral, and attendance tracking, the CMHC hopes to eliminate impediments to access.

Theoretical Framework

Intersectionality Theory

Psychological distress and substance dependence disproportionately harm marginalized groups. Intersectionality Theory asserts that social identities (e.g., race, gender, class) interact to form qualitatively different lifetime experiences, inequalities, and social power (Crenshaw, 1991). This theoretical framework informs our needs assessment, allowing us to critically examine service attendance gaps framed as dilemmas of inequity.

Methods

Needs Assessment

National effort is dedicated to highlighting barriers and gaps to care, and to motivating organizations and practitioners to eliminate barriers contributing to those gaps. This CMHC is furthering this effort as they seek to identify systematic trends in non-attendance that may illustrate barriers to BH access. Thus, a needs assessment is the method suited for this investigation. Its primary purpose is to highlight gaps between the reality and CMHC's vision (Aschtuld, 2015).

Multi-level Logistic Regression

Individuals were often scheduled for several services or rescheduling of the same service, resulting in nested data for most participants. Therefore, we will use a multi-level, logistic regression to assess the degree to which demographic, social characteristics, and multiple calls predict gaps in service attendance.

Analysis of Results

Intersectionality Theory will guide our analysis. We anticipate systematic patterns of non-attendance among people with disempowered identities. We suspect those with marginalized race, gender, regional location, and diagnosis categories will experience greater barriers to care and attend fewer services due to systemic-level issues beyond their immediate control. From a needs and intersectional perspective, historical and contemporary systems of oppression will need to be addressed in order to eliminate disparities in BH access.

Limitations

As is typical with non-experimental work, CMHC has not been able to collect and record all data for each interaction/service entry. Given this, some demographic and attendance information are missing, which may impact data analysis. Additionally, this analysis is quantitative; COVID-19 and limited time prevented a mixed methods analysis that would yield richer findings. As such, my findings will not benefit from the insight of those who did not attend services.

Future Work

A next step is to qualitatively assess users' barriers to access. Aligning their perspectives with Intersectionality Theory would situate their barriers within the history of oppression faced by people with behavioral health distress. From this theoretical underpinning, user insights can be used to guide CMHC programmatic changes that would target inequities contributing to non-attendance.

Broader Significance of Work

Using Intersectionality Theory as our guiding framework allows us to contextualize barriers to BH service as issues of social inequality rather than personal deviance. Doing so may allow for the root causes of non-attendance to be addressed (e.g. child-care, public transportation access). We may further Intersectionality literature by investigating the degree to which varying mental health diagnoses combine with other disempowered identities to qualitatively alter lifetime experiences; particularly, access to social services. Finally, this project may

further literature regarding the social stratification of service attendance and highlight pathways to service utilization equity.

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Intersectionality, Social Support, and Youth Suicide Prevention

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Keywords: suicidal ideation, family support, school support, marginalized, adolescent

Introduction

Suicide remains a public health issue in the United States with over 48,000 people lost to suicide in 2018 (Drapeau & McIntosh, 2020). Suicide rates among youth are particularly alarming with over 6,000 youth lost to suicide in 2017 (CDC, 2018). Current research has also shown elevated suicidality (i.e., suicidal thoughts and behaviors) among youth with marginalized identities based on gender (James et al., 2016), race/ethnicity (Sharaf, Thompson, & Walsh, 2009), and sexual identity (Cover, 2016). However, relatively little research has examined how these identities intersect to exacerbate risk for youth suicide (Standley, 2020).

Current Study

The present study (Standley & Foster-Fishman, 2020) works to address youth suicide and aims to contribute to the literature in three ways. First, the study utilizes a public health approach to examine suicidality and social support through the lens of the CDC's socioecological framework. Secondly, the study applies intersectionality—a theory assessing the intersection of multiple social identities, recognizing how those intersections are influenced by systems of power and oppression, and determining how those influences manifest at the individual level of experience—to determine which youth are most likely to experience suicidality (Crenshaw, 1989). Finally, the study examines how social support moderates the relationship between intersectionality and suicidality.

Three substantive gaps in the literature were addressed: the multiplicative impacts of intersectionality on youth suicidality, the role of school- and community-level support, and the compounding effects of family, school, and/or community-level support on youth suicide. In sum, the study investigated the role of intersectionality in determining which youth report higher suicidality, and how social support may be effective for these youth.

Methods

The study involved analysis of secondary data from ninth- and eleventh-grade high school students in a tri-county area who participated in the 2015-2016 wave of the Michigan Profile for Health Youth (MiPHY) survey (Michigan Department of Education, 2018). The sample included 5,058 respondents. Ages ranged from 13 to 18 ($M = 15$); 49.7% of the sample identified as male (50.3% female), and the majority of the sample was white (69.3%) and heterosexual (85.8%). Of those who were non-white, 8.3% were African American, 4.1% Asian, 0.9% American Indian/Alaska Native, 0.2% Native Hawaiian/Pacific Islander, and 17.2% identified with more than one racial identity. Only 1.7% identified as gay or lesbian and 6.9% identified as bisexual.

Gender, race/ethnicity, and sexual identity were measured using demographic items. Marginalized status for each identity was coded as 1 and 0 indicated nonmarginalized (e.g., nonwhite = 1, white = 0). Intersectionality was measured by creating a sum score across these variables. Thus, the intersectionality score represented the number of marginalized identities (e.g., 3 = three minority identities). Suicidality was measured using three items that assessed thoughts of suicide, plans to attempt suicide, and previous suicide attempts. Finally, items were included to measure family-level, school-level, and community-level social support. Statistical analyses included means comparisons and a series of standard and hierarchical regression analyses.

Results

Youth with intersecting marginalized identities (i.e., females and racial and sexual minority youth) were significantly more likely to report higher suicidality scores than their peers. Effect sizes suggest that of the identities included, sexual identity was most strongly related to suicidality while both gender and race indicated only a small association. In addition, results indicate that the more marginalized identities a respondent had, the more likely they were to report a higher suicidality score.

Social support at the family, school, and community levels was found to be significantly associated with lower suicidality scores, and the combination of family and school support was associated with the lowest suicidality scores. This suggests that the combination of support from multiple sources may be most protective for youth. Finally, family support significantly reduced the relationship between intersecting marginalized identities and suicidality. This suggests that, even in the face of hardship, social support from family can mitigate the impacts of marginalization on suicidality.

Implications

Research implications include the consideration and application of intersectionality in determining risk and developing prevention strategies. For example, these findings suggest that focusing on protective factors across multiple ecological levels may provide valuable insights for multi-level interventions. Policy implications include an improved understanding of incidence and protective factors that may aid in developing holistic, school-based social support programs that are culturally appropriate and engage youth in positive social interactions. Finally, practice implications include potential transformations for clinical and mental health care such as increased intersectional representation among providers and culturally informed and relevant treatment and prevention strategies.

Conclusion

Overall, these findings highlight the importance of paying attention to social support across multiple ecological contexts where youth live, learn, and play (Standley, 2020). Findings also suggest that measuring and reporting social identities as well as their intersections adds to our understanding of youth suicidality. By expanding beyond the individual level and considering how factors beyond mental health may impact suicidality, the field of suicidology can do more to inform school- and community-level interventions and potentially save more lives.

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Examining Economic Abuse and Relevant Psychosocial Factors Among Unstably Housed Domestic Violence Survivors

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Keywords: domestic violence survivors, housing instability, criminal record

Introduction

In the U.S., housing instability is a pervasive issue affecting millions of people (JCHS, 2019). Housing instability refers to the extent to which one is able to maintain or obtain safe and stable housing. Housing instability is prevalent among female domestic violence survivors. Domestic violence (DV) refers to psychological, physical, or sexual abuse done by one partner to maintain power and control over the other (NCADV, 2015). DV survivors often experience high rates of homelessness, the most severe form of housing instability (Jasinski et al., 2005). Therefore, it is imperative that research explores how DV contributes to housing instability and whether its impact differs by the type of violence experienced as well as the social location of survivors.

Prior studies on the impact of domestic violence on housing instability have often excluded economic abuse, which occurs when an abuser intentionally exploits, restricts, and controls a survivor's financial resources (Adams, 2008; Adams et al., 2018; Breiding et al., 2017; Dichter et al., 2017; Pavao et al., 2007; Ponc et al., 2011). Economic abuse may diminish survivors' financial security, reducing their ability to secure safe and stable housing (Postmus et al., 2012).

Moreover, DV survivors may experience housing instability differently. Studies on the general population show that housing instability is higher for People of Color, non-citizens, and people with a criminal record (Chang, 2019; Desmond, 2016, p. 290; Evans & Porter, 2014; Evans et al., 2018; Lyubansky et al., 2013). These patterns may be similar among DV survivors; however, these relationships have not been fully explored among a population of DV survivors. The purpose of this study was to empirically examine if economic abuse, race, citizenship status, and criminal record are associated with severe housing instability among unstably housed DV survivors.

Methods

This study utilized secondary data from the DV Housing First (DVHF) Demonstration Evaluation, a longitudinal evaluation by Dr. Cris Sullivan. The current study used baseline data from 392 female DV survivors. The measures included in the study were housing instability as the outcome variable. The housing instability measure included only 3 items such as: need for housing, housing status and number of moves. An example item was "how many times did you move in the last 6 months?" Each of the items were originally multiple categories but were then dichotomized and summed for a total score ranging from 0 indicators to 3 indicators.

Predictor variables were experience of violence (physical, sexual, emotional, psychological, stalking/harassment, and economic abuse), financial difficulties, race, citizenship status and criminal record. To address the research objective, a series of ordinal logistic regression models were conducted.

Results

DV survivors who had a criminal history (n=129) were more likely to experience severe housing instability than were DV survivors without a criminal record (n=263). Contrary to expectations, DV survivors who were U.S citizens (n=321) were more likely to experience severe housing instability compared to non-citizens(n=72). Economic abuse was not associated with severe housing instability and racial differences were not evident (AOR=1.02, $p=.875$; AOR=.671, $p=.051$).

Limitations and Implications

One significant limitation in this study was the measure of housing instability. The measure of housing instability only included three items and was not validated. Second, the measure of race only assessed self-identified race categories where other racial measure have been able to address discrimination (e.g ascribed race, skin color). In addition, the sample size introduced several limitations. First, the sample compromised of homeless and unstably housed cis-gendered female DV survivors; therefore, findings from this study cannot be generalizable to all DV survivors with diverse backgrounds. Secondly, the sample of non-citizens was too small to separate undocumented from documented non-citizens, and prior research has shown that undocumented individuals report more housing instability in comparison to their documented counterparts Chavez, 2012; McConnell, 2013; Hall & Greenman, 2013).

Some important implications from this study is the need for a comprehensive, validated measure of housing instability for DV survivors (Fredrick et al., 2014; Routhier, 2019). In addition, having a criminal record poses a serious housing barrier for DV survivors. It is important that policymakers enforce anti-discriminatory laws that bar survivors with a criminal record from housing and should note what anti-discriminatory laws have been put in place and their effectiveness in meeting the needs of DV survivors (Keefe & Hahn, 2020). Overall, this study provided some understanding of what contributes to severe housing instability in the hopes to aid in the support of unstably housed and homeless DV survivors.

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Knowing Ties: An Egocentric Network Analysis of Female African American Adolescents Sexual Health Information Seeking

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Keywords: sexual health education, egocentric network analysis

Introduction

Sexual health knowledge is information that helps individuals avoid contracting sexually transmitted infections (STI), Human Immunodeficiency Virus (HIV) and unintended pregnancies. As such, sexual health knowledge is critical for decreasing STI/HIV rates. Given that African American female adolescents are disproportionately affected by STIs and HIV, a lack of sexual health knowledge may be a potential predictor of increased STI/HIV risk among this group. Although sexual health knowledge has not been definitively shown as a predictor of increased STI/HIV acquisition, low levels of sexual health knowledge have been associated with increased STI/HIV acquisition (Blackstock et al., 2015). Studies have indicated that there are substantial racial/ethnic differences in sexual health knowledge (Garofalo et al., 2015). Beyond this, research also suggests that the source of STI/HIV knowledge varies across race and ethnicity and may influence overall sexual health knowledge (Friedman & Bloodgood, 2010; Meneses et al., 2006). Although African American female adolescents are largely impacted by STIs and HIV, few studies have examined the sources of sexual health knowledge such as those in social networks, among African American young adults and adolescents, leaving a gap in the literature. The current study will examine sources of sexual health knowledge among African American female adolescents embedded in their information networks using an egocentric network approach.

Research Questions

1. How many people do African American female adolescents go to when seeking out health information? (i.e., network degree)
 - a. Is this associated with participant characteristics? (e.g., age, previous sexual experience)
2. How do adolescents define the closeness of the relationships with their alters (e.g., who the person is connected to?)
3. What is the frequency of communication with their alters?

Method

This study will use an egocentric network research design, focused on the perspective of the individual, to examine African American female adolescents' social ties when seeking out sexual health knowledge. The use of an egocentric network analysis for the exploration of information seeking among African American female adolescents is ideal because ego networks have been cited as an important source of information (Carolan, 2014).

Research Site

This study will be conducted at a medium sized public high school in the southeastern United States. This site was selected based on convenience and ease of access because of my existing relationship with administration at this school. Participants will be recruited by visiting the school and sharing flyers. Probability sampling will be used to sample a minimum of 50 African American female adolescents between the ages of 15–19.

Data Collection

Data will be collected using name generating procedures via a web-based network survey. Upon receiving the survey link, participants will be asked to 1) list the names of individuals whom they turn to for information regarding sexual health, 2) define the relationship (e.g., parent, friend, teacher, colleague), 3) rate the closeness for each individual listing using a 5 point Likert type scale and 4) rate the frequency of communication for each individual listing using a 5 point Likert type scale. Demographic information will also be collected on participant race, ethnicity, age, sexual orientation (heterosexual, lesbian, bisexual, unsure, other), grade (9th, 10th, 11, 12th), parental birthplace, and whether or not they are sexually active.

Data Analysis

Stata 15 will be utilized to run descriptive analyses and bivariate correlations between network degree and sociodemographic variables. Social network analysis will be conducted using UNICET 6 (Borgatti, Everett, & Freeman, 2002) to calculate network metrics, such as network degree, tie strength, and map the networks into sociograms. Network degree will identify the number of alters, ties, or contacts that an actor has in a network (Prell, 2012). Tie strength will be measured by the frequency of communication (Prell, 2012). A sociogram will be created for each participant to illustrate the social relationships they have for seeking out sexual health knowledge. Lastly, the sociograms will be visually inspected to check for any emerging patterns to help contextualize the characteristics of participants' sexual health information networks.

Limitations and Implications

Given that this study will only take place at one high school, the results may not be generalizable beyond this setting. Despite this, the anticipated results of this project may have meaningful implications for sexual health research, policy, and practice. Outcomes from this study will provide useful information to inform future research on sexual health knowledge research among African American adolescents generally. Furthermore, study results may inform the development of policies that promote holistic and progressive sex education programming. Lastly, findings may motivate parents to enhance their communication practices regarding sexual health conversations with their children.

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Early Life Undernutrition Causes Growth Restrictions and Alters Cardiomyocyte Development In Mice

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Keywords: undernutrition, cardiomyocyte, binucleation, left ventricular hypertrophy

Background

An estimated 165 million children worldwide under 5 years of age are severely malnourished.¹ Children between the ages of 6 months and 2 years are particularly prone to nutritional deficiencies, as a result of premature weaning, a low-protein diet, and disease.² This may lead to children being classified as underweight, which is associated with a range of poor health outcomes, including poor fetal and neonatal death, inhibited growth, and an increased risk of developing chronic diseases in adulthood.² The high mortality rates caused by growth restriction call for a systematic investigation to determine the mechanism via which undernutrition in early life leads to chronic disease in adulthood.

Past research shows that early life undernutrition reduces the size and nucleation (e.g. number of nuclei) of cardiomyocytes (e.g. heart cells).³ Human cardiomyocytes tend to increase in size until 20 years of age, and after this time, the number of mononucleated cells remains relatively constant, while the number of polynucleated cells proliferate into adulthood.⁴ In the womb, when fetal nutrient intake exceeds the mother's placental supply, blood flow is redistributed away from the fetus, which affects fetal cardiac development and can lead to reduced nucleation and larger cardiomyocytes.⁵ These alterations will reduce the contractile properties of the cardiomyocyte cell, lead to poorer function of the heart and contribute to developing heart disease later in life.

However, the particular developmental window of when fetal cardiomyocyte growth is most sensitive to undernutrition is unknown. While the long-term consequences of prenatal undernutrition are well documented, there is insufficient research surrounding the extent to which postnatal alterations in cardiac cell size and nucleation (mono-, bi-, poly-) correlate with nutritional deficiencies.⁶ Thus, the purpose of this research was to determine when during early life does undernutrition alter cardiomyocyte size and nucleation. Our hypothesis states that undernutrition during the early phase (days 1-11 of life) will reduce cardiomyocyte nucleation, while undernutrition during the late phase (days 11-21 of life) will reduce cardiomyocyte size. By determining the developmental window of when cardiomyocyte growth is affected, future studies can develop and administer therapeutic interventions during this period to potentially reverse the effects of early-life undernutrition on heart health and eventually decrease the risk of developing cardiovascular disease in adulthood.

Methods

Mouse dams were given either a control (CON: 20% protein) or isocaloric low-protein (LP: 8%) diet before mating. A cross-fostering model was utilized in which the pups were nursed by dams given a low protein diet during early (EUN; PN1-10), late (LUN; PN11-21), and the

complete (PUN; PN1–21) phase of the mice’s postnatal life. On PN21, the mice’s hearts were ethically removed and the cardiomyocytes were preserved in 10% zinc formalin and phosphate saline buffer. These were later stained with antibodies to myosin heavy chain followed by an AlexaFluor 647 tagged–secondary antibody. The cardiomyocyte nuclei were highlighted visually with Sytox Green using an inverted confocal laser microscope and processed in ImageJ to count the number of nucleated cells and measure the size of cardiomyocytes (cross-sectional area (CSA)). In the analysis, nucleated cells were recorded as mononucleated (meaning one nuclei), binucleated (meaning two nuclei), or polynucleated (meaning more than two nuclei). We wished to observe how an undernutrition diet influences each nucleation stage in particular to predict its composition relative to humans.

Results and Implications

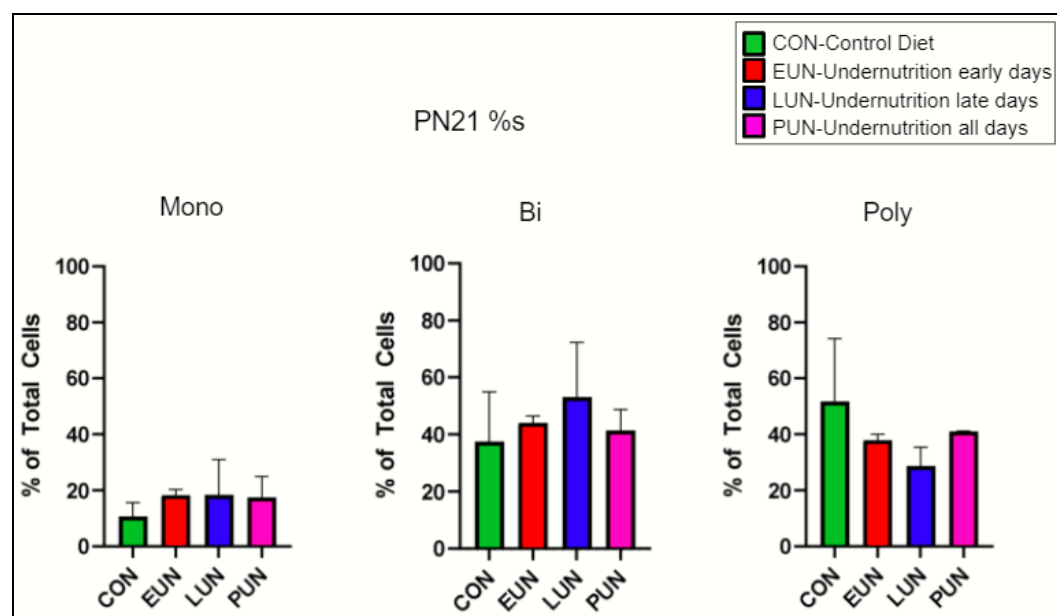


Figure 1:
Undernutrition in early life does not affect cardiomyocyte nucleation.

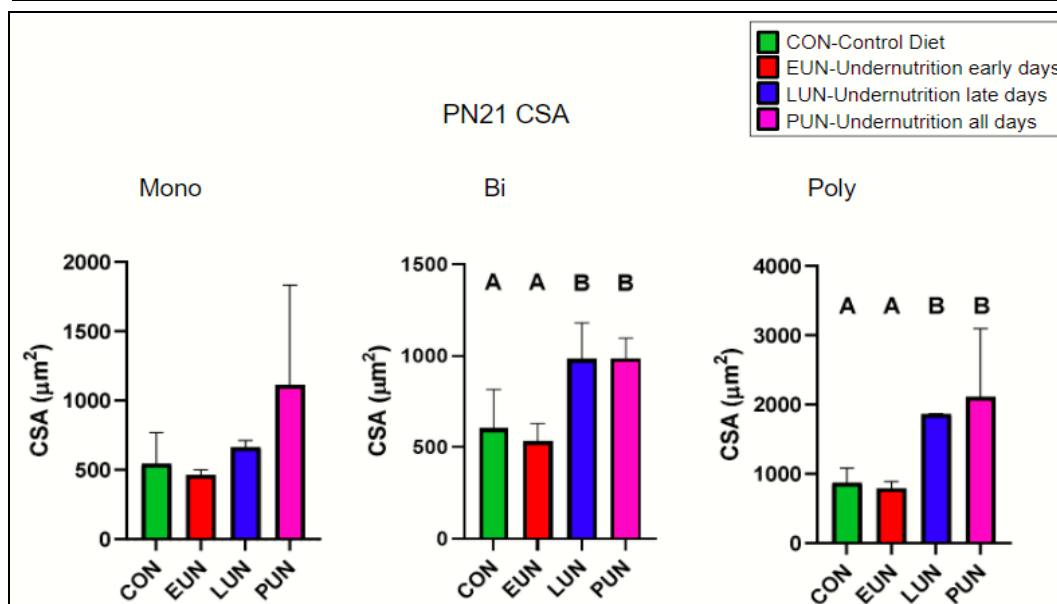


Figure 2:
Undernutrition in early life affects cardiomyocyte size (CSA); which is indicative of a pathological condition.

Our results showed that mice that were undernourished during the entire postnatal phase (days 1–21) or during the late postnatal phase (days 11–21) had significantly larger cardiomyocytes ($P=0.0452$) than control mice or early undernourished mice (days 1–10). Specifically, this group had larger bi- and polynucleated cardiomyocytes ($P=0.0288$) than control mice and early undernourished mice, which is indicative of a pathological condition known as left ventricular hypertrophy. Undernutrition causes mice to compensate for the lack of nutrients by increasing the workload on the cardiac muscles, which tends to thicken the chamber wall and lead to larger cardiomyocytes. The enlarged heart muscle loses its elasticity and becomes less efficient at exciting and exerting blood flow out at an appropriate force, which if prolonged, can contribute to developing cardiovascular disease in adulthood. While undernutrition did not impact cardiomyocyte nucleation (e.g. no significant differences were found in the number of nucleated cells during each distinctive window across treatment groups), collectively, our findings show that the late phase of postnatal life are promising targets for delivering therapeutic drugs to combat undernutrition and improve cardiomyocyte health. This investigation furthered our knowledge of when during postnatal undernutrition in adults does impairment of cellular and organ function occur. Using the preclinical model will help solve the consequences of early-life undernutrition within the digestive and cardiovascular system translatable to postnatal humans.

Future Work

Further studies should elucidate the specific molecular signaling pathways by which growth restriction prevents cardiomyocyte binucleation.⁷ Cell binucleation accounts for enhanced cellular survival when coping with stress and meeting the high metabolic demands of cardiomyocytes. We also wish to investigate the contributions of oxidative stress and activation of signaling kinases on the development of cardiac ventricular hypertrophy. Furthermore, ongoing analyses from rodent models will focus on the known role of mechanistic target of rapamycin (mTOR) receptors to nutritional deficiency in fetal development, nutrient response and regulation to cellular stress.⁸

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Developing a Novel Organic Anion Transporter Protein for Decreasing Type 1 Diabetes

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Keywords: Type 1 Diabetes, beta cells, harmine, hepatic plasmid

Introduction

The human body's ability to regulate insulin levels in the bloodstream is crucial for the metabolism of glucose¹. Not being able to metabolize glucose through insulin can increase the risk of developing **Type 1 Diabetes (T1D)** or lead to organ failure². Treatment options such as insulin injections and beta-cell transplants have substantially helped decrease mortality rates from T1D³. However, these treatments are expensive and their beneficial effects are temporary. Studies have estimated that 463 million individuals globally will continue to suffer from T1D and this number is projected to increase to 700 million by 2045⁴. Thus, it is critical that we develop different treatments to improve the wellbeing of individuals who suffer from T1D. **My research focuses on bioengineering a novel transporter drug that can enhance survival of insulin-secreting beta-cells and consequently improve treatment for numerous diabetic patients.** This will dramatically improve their well-being and likely reduce the challenges they and their families face.

It is well established that beta cells can secrete insulin and use this insulin to regulate the amount of glucose stored in tissues¹. Providing donor beta-cells to patients with T1 Diabetic has shown to increase their overall wellbeing. However, these cells have a maximum life span of 5 years⁵. Previous research indicates that small doses of harmine, a small molecule with psychoactive properties, can increase beta cell proliferation *in vitro* and *in vivo*⁶. Thus, harmine represents a valuable solution since it can ensure a continual source of beta cells in the body. However, harmine uptakes non-specifically to the brain, lung, and kidneys which can cause major side effects⁷. Therefore, the main challenge with this treatment approach is to reduce the overall systemic amounts of harmine while simultaneously increasing its uptake *exclusively* to beta cells. To overcome this challenge, I propose to bioengineer a hepatic (Pig) plasmid that codes for OATP1B3, an organic anion transporter protein that can actively transport harmine. **I hypothesize that bioengineering a robust OATP1B3 into beta cells will increase the specific transport of harmine into cells and consequently lead to beta cell proliferation.** A magnetic resonance

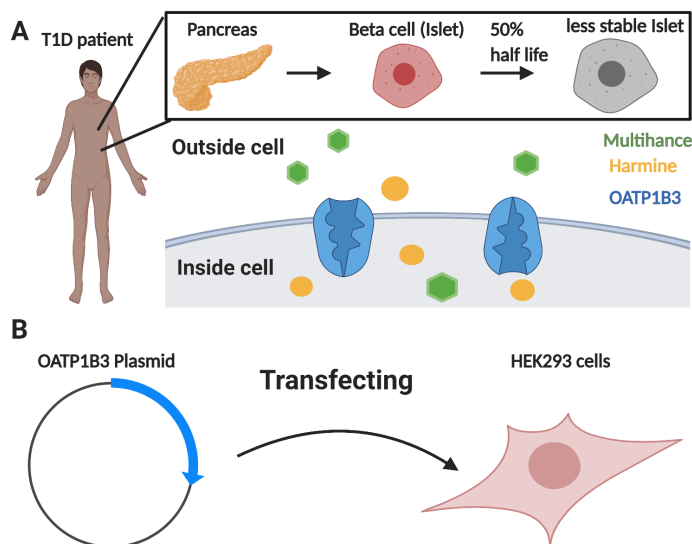


Figure 1: (A) An overview of how beta cells are transplanted into T1D patient, this over time leads to less stable transplanted cells. A combination of OATP1B3, Harmine, and Multihance are all being used to improve and validate cellular proliferation. (B) An overview of the aims explaining the designing of OATP1B3 plasmid via random mutagenesis and its transfection into cells to verify the plasmid's function.

imaging (MRI) agent called multihance will be used to validate that the OATP1B3 plasmid has uptaken harmine and that beta cells remain viable post uptake (**Fig.1A**).

Methods

AIM1: Develop OATP1B3 plasmid for the enhancement of harmine uptake. The OATP1B3 gene will be cloned into a plasmid using a tool called Gene Script which will design the specific primers that can copy and translocate the OATP1B3 gene (**Fig.1B**). The plasmid will then be transfected and tested in human embryonic kidney (HEK293T) cells. During transfection, Indocyanine Green (ICG), a fluorescent marker, will be used to measure the harmine uptake activity of the OATP1B3 plasmid using an In Vivo Imaging System (IVIS) and magnetic resonance imaging.

AIM2: Optimizing OATP1B3 for better uptake of harmine. We will use GeneMorph® II Random Mutagenesis Kit (Agilent Technologies), which relies on error-prone PCR to generate random mutations. This will allow us to find the number mutations that are necessary to make a robust OATP1B3 plasmid. The mutation frequency can be tuned to one mutation per clone by varying the ratio of template DNA and number of PCR cycles. After random mutagenesis of the OATP1B3 plasmid, it will be transfected again into HEK293T cells and then measured using methods described in Aim 1.

Anticipated Results

Findings from Aim 1 will determine whether the harmine uptake activity of the OATP1B3 plasmid is acceptable. We expect for OATP1B3 plasmid to be functionable as a transmembrane protein that can be used for future experiments. The results from Aim 2 will help us to determine how many random mutations are needed to modify for the most fit OATP1B3 via directed evolution. We expect that 3-4 mutations will be necessary to optimize the OATP1B3 plasmid. Collectively, our findings will further our knowledge of potential treatment options that can lead to beta-cell proliferation and improved health outcomes in diabetic patients.

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Impact of Student-Centered Formative Assessment on Academic Performance: A Case Study

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Keywords: academic performance, formative assessment, higher education, student success, online learning.

Introduction

Academic performance is a core indicator of student success in formal higher education. Course grades and GPA are widely recognized measures of students' academic performance (Daumiller & Dresel, 2018; 2019). Formative assessment is a type of assessment that focuses on improving the teaching and learning process through a timely and optimal feedback process. This type of assessment is often unilateral such that the teacher provides feedback to the student about their work to improve performance (Evans, 2013). Such assessments are important for monitoring learning and assessing students' understanding until the desired level of knowledge is achieved (Baleni, 2015). While scholars acknowledge the benefits of providing feedback to students through formative assessment, there is lesser attention given to the *reverse process* of gathering feedback from students on the assessment (Light et al., 2009; Ashton et al., 2013). Given the relevance of teaching and course assessment practices to academic performance, it is imperative to explore the potential benefits of soliciting feedback from students on the assignments and exams used to evaluate their learning. The current exploratory case study seeks to examine the impact of utilizing a formative assessment of quizzes on the academic performance of students over time. Specifically, this study seeks to answer the following research question: Does the incorporation of student feedback on quizzes through formative assessment improve academic performance over time?

Methods

The case study utilizes a convergent mixed methods design, and collects qualitative and quantitative data at the same time. Data was collected from students enrolled in an online undergraduate psychology course. Percent scores on two multiple-choice quizzes completed as part of students' coursework was used as a quantitative measure of academic performance. Specifically, students completed Quiz 1 in the second week and Quiz 2 in the fourth week of the course. An online qualitative survey administered at the end of Quiz 1 was used as a formative assessment measure. Specifically, students were asked to respond to three open-ended questions: a) what students liked the most about the quiz, b) what students liked the least about the quiz, and c) how the instructor can better support their quiz preparation process.

Data Analysis and Results

Data from 42 students were analyzed for inclusion in this study. Most of the students were female (85.7%) and in their junior year (47.6%). Thematic analysis of qualitative survey responses was conducted, and the findings from student feedback was incorporated into the course. Specifically, the instructor: 1) uploaded PowerPoint lecture handouts to the course site, 2) reworded subsequent quiz questions to prevent confusion, 3) uploaded online resources on effective study habits and managing test anxiety to the course site, 4) disabled the restriction

on backtracking to allow students to navigate to previous questions, 5) extended quiz time limit, and 6) provided a study guide.

A paired sample t-test was conducted using SPSS to test mean differences in student scores on Quiz 1 and 2. Findings revealed that student scores on Quiz 1 and Quiz 2 were moderately and positively correlated ($r = 0.583$, $p < 0.001$). The mean score on Quiz 1 was 77.9, while the mean score on Quiz 2 was 93.5. On average, student scores on Quiz 2 were 15.5 points higher than scores on Quiz 1 (95% CI [11.60, 19.35]). The average difference between Quiz 1 and Quiz 2 scores was statistically significant ($p < 0.001$). These results suggest that course modifications implemented by the instructor using student feedback led to an overall improvement in students' academic performance.

Broader Implications and Significance of Work

Findings from this case study should be considered in light of the study limitations. This study included a sample of students in a psychology course which limits its generalizability to students in other courses who may have different experiences. Additionally, this study did not include a comparison group which limits the ability to ascertain that student outcomes observed were attributable to course modifications. As such, future research should include more robust evaluations of the impact of formative assessment on the academic performance of diverse groups of students over time. Such evaluations should include a control group. Despite its limitations, findings from this study highlight the benefits of in-process evaluations of student performance and learning needs during a course. Classroom instructors in higher education settings should incorporate opportunities for students to provide feedback on assignments and other components of the course. The course structure, format, and materials should be modified using student feedback, and student resource needs should be adequately attended to.

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How Welfare and Race Mediate Dissatisfaction with Local Government and Sociopolitical Participation: A Policy Feedback Approach

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Keywords: local politics, policy feedback, race, welfare, satisfaction

Introduction

What is the relationship between dissatisfaction with government and sociopolitical behavior? There is very little debate about whether participation matters for democracy. Government cannot be responsive to those who do not participate in it (Pitkin, 1967). Thus, it is important to understand who is and is not participating in a democratic system. Previous scholars have studied the effect of distributive policies on participation (Campbell, 2003; Michener, 2018; Pierson, 1993). Scholars have noted the lack of consideration for the role of race in policy feedback literature (Michener, 2017). I argue that the well documented stigma associated with having experiences with the American welfare system for nonwhites, particularly for Blacks and Latinos, creates a negative interpretive effect and hence has a negative effect on political participation. *I expect that nonwhites with welfare experiences will exhibit increased dissatisfaction with local government compared to those without a welfare experience. And hence, that for those with welfare experiences, nonwhites will exhibit lower levels of participation as dissatisfaction with local government increases.*

Data and Methods

First, I am interested in examining how having a welfare experience and being dissatisfied changes a person's level of sociopolitical participation. I measure sociopolitical participation in two forms, civic participation and non-electoral political participation. I studied these effects using a nationally representative survey fielded on *Lucid Academic* in March 2019. The survey sample includes 1214 participants living in the United States. The main variables of interest are: level of local government dissatisfaction, civic participation, (non-electoral) political participation, welfare experience, and race. I control for religiosity, education, ideology, race, age, and income, as these variables have been found to be related to political participation and are typically controlled for in participation models.

I utilize an Ordinary Least Squares (OLS) regression to estimate the relationships of interest. First, I test the effect of being nonwhite and experiencing welfare on dissatisfaction as follows:

$$\text{Dissatisfaction} = \alpha + \beta_1 \text{Welfare} \times \text{Nonwhite} + \beta_2 \text{Welfare} + \beta_3 \text{Nonwhite} + \beta_i X_i + e_i$$

where $\beta_i X_i$ is a vector of controls.

Then, to examine the effect of the interaction between race, welfare experience, and dissatisfaction in local government on participation, I again regress participation on the interaction of nonwhite, welfare, and dissatisfaction with the same controls. I expect the interaction effect, *nonwhite x welfare x dissatisfaction*, to be negative. This model takes the following form:

$$participation = \alpha + \beta_1 Welfare \times Nonwhite \times Dissatisfaction + \beta_2 Welfare + \beta_3 Nonwhite + \beta_4 Dissatisfaction + \beta_5 Nonwhite \times Dissatisfaction + \beta_6 Nonwhite \times Welfare + \beta_7 Welfare \times Dissatisfaction + \beta_i X_i + e_i$$

Figures were generated using an observed values approach with R's margins package.

Results

Analyses show that dissatisfaction matters for those who have had a welfare experience (**Fig. 1**). For those who have had experiences with welfare policy, dissatisfaction appears to be a factor of demobilization (**Fig. 2 and Fig. 3**). However, there was no clear evidence that race has any impact on the effect of dissatisfaction on participation regardless of welfare status (**Fig. 2 and Fig. 3**). This is perplexing given that nonwhites on welfare were more dissatisfied than whites with welfare experiences.

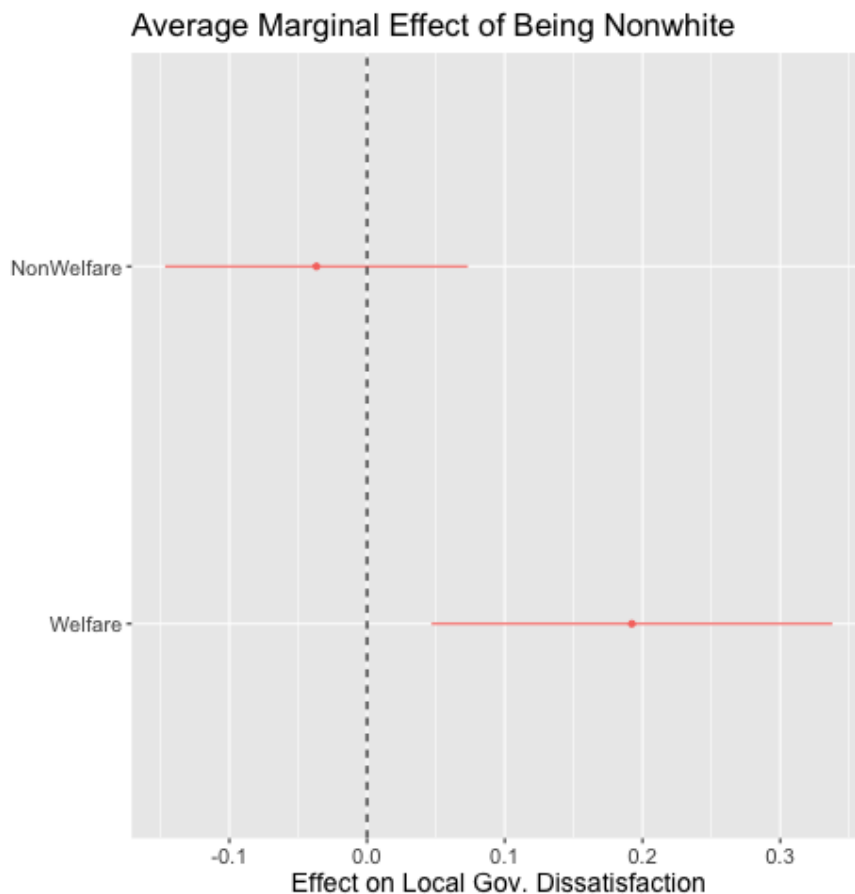


Figure 1. The marginal effect of welfare experience on dissatisfaction. Effects estimated for each condition of nonwhite, while all other variables were held at their mean.

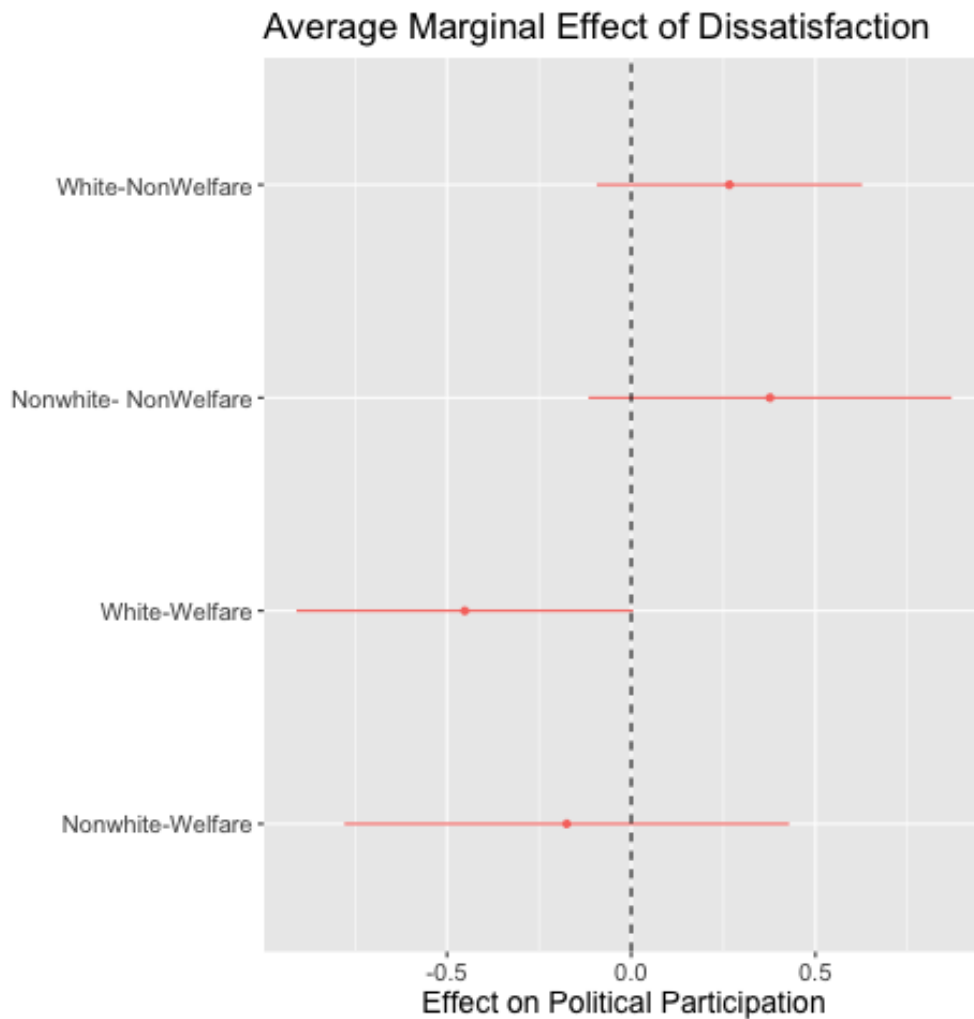


Figure 2. The marginal effect of dissatisfaction on political participation, given welfare experience. Effects estimated for each condition of welfare and nonwhite, while all other variables were held at their mean.

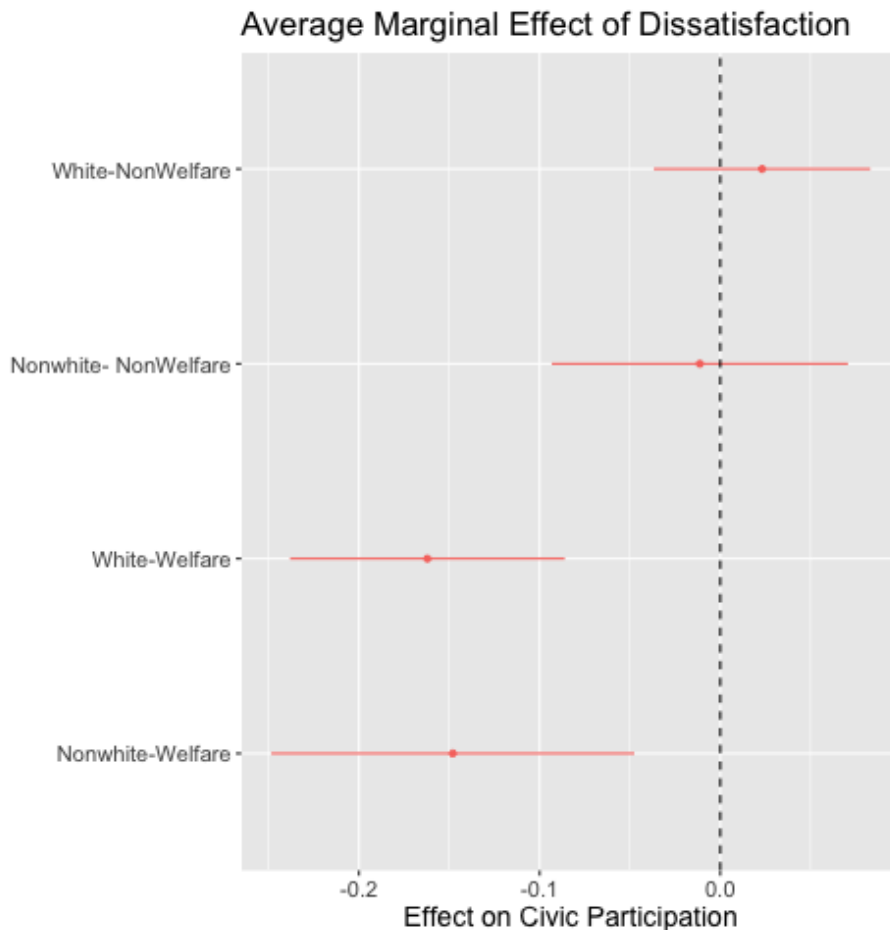


Figure 3. The marginal effect of dissatisfaction on civic engagement, given welfare experience. Effects estimated for each condition of welfare and nonwhite, while all other variables were held at their mean.

Implications

This study presents further evidence and a more nuanced understanding of how policies influence political participation. Findings point to an inherently unequal power structure. We observed that those on welfare are less likely to participate politically if their level of dissatisfaction with local government is increasing. This could potentially induce a political system in which poor people do not participate and are unrepresented. The next step is to understand the mechanisms for which dissatisfaction increases for those interacting with the welfare system and other distributive policies.

Limitations

This approach has several limitations. Most importantly, having more data across the different racial and welfare groups may improve the strength and accuracy of the relationships that were analyzed. Future studies should also determine the extent to which someone has experienced welfare and should consider how lasting the political effects of experiencing welfare are.

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Identity Politics Revisited

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Keywords: Combahee River Collective, identity politics, liberation, Black feminism

The Combahee River Collective was formed in 1974 by Barbara Smith, Demita Frazier, Margo Okazawa-Rey, and Beverly Smith. The collective borrowed its name from the river that Harriet Tubman crossed to free over 750 slaves in South Carolina.¹ Combahee River Collective (CRC) members did not want to name to themselves after a person; instead, they wanted to “name ourselves after an action...and not only a political action but a political action for liberation.”² The CRC politicized Black Feminism and this particular statement introduced an analysis, “interlocking oppressions,” as a way to describe the simultaneity of oppression and the ways in which oppression can be compounded, making Black women more vulnerable to various kinds of subjugation. They write, “The most general statement of our politics at the present time would be that we are actively committed to struggling against racial, sexual, heterosexual, and class oppression, and see as our particular task the development of integrated analysis and practice based upon the fact that the major systems of oppression are interlocking” (*Words of Fire*, p. 232). The CRC’s understanding and concretization of “interlocking oppressions” builds upon their foremothers, Sojourner Truth, Anna Julia Cooper, and Frances Beale and many others. Sojourner Truth, in 1851, asks if she is a woman—for her, woman is another moniker for human. She questions if she is human enough to receive relief and rest like her white female counterparts. In her refrain, “Ain’t I A Woman,” we see race and gender collide. Anna Julia Cooper, in 1862, demands that her race and gender be considered indivisible identities that are simultaneously operational in all *rooms* she enters. Frances Beale coins “double-jeopardy” in 1969 to address the myriad ways Black women have been misrepresented in society, and the exploitation Black women face sexually, socially, and economically.³ The CRC are a bridge with multiple crossings. The statement galvanized Black women and expanded the vision of Black feminism. Our foremothers understood racialized gender and class—their vision is extended through the CRC’s understanding of racialized sexuality.

The Combahee River Collective Statement was published in 1977. The statement itself is divided into four parts: (1) The genesis of contemporary Black Feminism; (2) What we believe; (3) Problems in Organizing Black Feminists; (4) Black Feminist Issues and Projects. In section one, the collective’s citational practice is underscored, as they name the foremothers of Black feminism, remembering that they come from a long lineage of fugitivity and radical thinkers. The collective writes, “before looking at the recent development of Black feminism we would like to affirm that we find our origins in the historical reality of Afro-American women’s continuous life-and-death struggle for survival and liberation...There have always been Black women activists—some known, like Sojourner Truth, Harriet Tubman, Frances E.W. Harper, Ida B. Wells Barnett, and Mary Church Terrell, and thousands upon unknown—who have had a shared awareness of how their sexual identity combined with their racial identity make their whole life situation and the focus of their struggles unique. Contemporary Black feminism is the outgrowth of countless generations of personal sacrifice, militancy, and work by our

mothers and sisters” (WOF 233–234). Demita, Beverly, and Barbara speak to the long lineage of fugivity and activism that predates the birth of their own revolutionary thinking. Black women’s radical activism begets Black women’s radical activism. CRC’s analysis is an extension of previous articulations, revolutions, and uprisings. The authors express that their presence has been rendered invisible because of racism in the second wave feminist movement and sexism and homophobia in the Civil Rights, Black nationalism, and Black Panther movements: “It was our experience with disillusionment within these liberation movements, as well as experience on the periphery of the white male left, that led to the need to develop a politics that was anti-racist, unlike those of white women, anti-sexist, unlike those of Black and white men” (WOF 233). These chasms created through circumstances beyond their control that rendered them invisible and overlooked, motivated the formation of the collective, and the creation of a statement aimed to embolden women of color.

The CRC prioritized bringing language to the specific inequities they had to contend with and that is why their political analysis salient: “This focusing upon our own oppression is embodied in the concept of identity politics. We believe that the most profound and potentially most radical politics come directly from our own identities, as opposed to working to end somebody else’s oppression” (*Words of Fire* 234).

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¹ Tubman is still the first woman in U.S History to ever successfully lead a military campaign.

² see *How We Get Free: Black Feminism and The Combahee River Collective*, 31.

³ Also, these theories continue. In 1988, Deborah King publishes her essay, “Multiple Jeopardy, Multiple Consciousness: The Context of a Black Feminist Ideology” wherein she describes racism and sexism are quotidian forms of oppression that is compounded by class; here, she develops the ideology of, “multiple jeopardy, multiple consciousness.” Also, in 1991, Crenshaw builds upon the aforementioned activists, coining the term “intersectionality” in 1991. She provides a name and constructs a frame that allows us to see where power comes from, where it collides, and how Women of Color, most specifically, are more vulnerable to forms of structural oppression. See, “Mapping the Margins: Intersectionality, Identity Politics, and violence against Women of Color.”

Preliminary Effectiveness of the ACT SMART Implementation Toolkit: Facilitating Implementation in Community-Based Organizations

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Keywords: autism, implementation, evidence-based practice, community-based organizations

Background

Autism spectrum disorder (ASD)—the lifelong neurodevelopmental disorder characterized by impaired social communication and repetitive behavior and/or restricted interests—affects 1.8% of the U.S. population. Evidence-based practices (EBPs) developed for this population (ASD-EBPs) are effective in improving these core deficits and common co-occurring symptoms.¹ However, EBP utilization is varied in community-based organizations (CBOs) providing services to children with ASD, highlighting a significant research to practice gap.²

Implementation guides provide a systematic method for increasing the use of EBPs in CBOs, while also addressing barriers throughout the implementation process.³ The Autism Community Toolkit: Systems to Measure and Adopt Research-Based Treatments (ACT SMART Toolkit)⁴ is an implementation guide developed based on prior research examining barriers and facilitators to EBP implementation in ASD-CBOs, with the aim of addressing client, provider, and contextual factors impacting implementation. This Toolkit is a comprehensive web-based interface designed to guide organizational staff through five phases of implementation, based on an adapted version of the Exploration, Preparation, Implementation, Sustainment framework.^{3,4} This project presents preliminary data on the clinical effectiveness of the ACT SMART Toolkit in increasing EBP utilization in ASD-CBOs.

Data and Method

Six ASD-CBOs in Southern California met eligibility criteria—social and/or research collaborations with other agencies/researchers/collaborative groups; efforts to receive additional staff training; interest in implementing new EBPs—and participated in the pilot study. All agencies reported a need for one of the three EBPs (social narratives, video modeling, self-management) selected for the ACT SMART Toolkit pilot study. Once the pilot study began, all six agencies selected video modeling for the EBP to be implemented at their agency.¹ Five ASD-CBOs completed all phases of the Toolkit; one organization selected not to adopt video modeling after completing phase 2 (Adoption Decision) of the Toolkit.

Supervisors and direct providers at each participating organization completed an agency assessment at pre- and post-pilot. This assessment gathered demographics information and included a measure to obtain data on each organization's utilization of various interventions, including video modeling. Specifically, supervisors self-reported on their utilization of each EBP, and reported on direct providers' use of each EBP. Additionally, direct providers self-reported on their utilization of each EBP.

Results

Due to the small sample size, effect sizes (Hedge's g) were calculated to evaluate clinically meaningful changes in EBP utilization at each participating CBO, from pre- to post-pilot.⁵ Results indicated a medium effect size (0.52) for supervisor-reported use of video modeling, suggesting a moderate increase in supervisor use of video-modeling from pre- to post-pilot. Additionally, findings illustrated a large effect size (0.88) for supervisor-report of direct provider's use of video modeling, indicating that supervisors reported that direct providers utilized video modeling more often at post. Finally, results indicate a large effect size (0.94) for direct provider-reported use of video modeling, suggesting that direct providers utilized video modeling more often upon completion of the pilot study (Table 1).

Table 1. Mean, SD, and Effect Sizes

<i>N=5 organizations</i>	Mean (SD) Pre-Pilot	Mean (SD) Post-Pilot	Effect Size (Hedges g)
Supervisor Use	.396 (.456)	.612 (.372)	.52
Supervisor-Report of Direct Provider Use	.246 (.310)	.576 (.428)	.88
Direct Provider Use	.222 (.235)	.522 (.386)	.94

Future Directions

Due to study limitations, this project may be improved in the future in three different ways. First, future work should focus on evaluating the effectiveness of this Toolkit with a larger sample size in order to examine statistically significant differences in the effectiveness of the Toolkit. Additionally, all agencies selected the same ASD-EBP for implementation; however, future research should test the effectiveness of this Toolkit when implementing different and more complex ASD-EBPs to better understand generalizability of these findings. Finally, future work will aim to examine the effectiveness of this Toolkit across a variety of settings (i.e. community-based organizations, schools, etc.), in order to facilitate greater use of EBPs across service settings, thereby increasing the availability of evidence-based practices for children with ASD.

Implications

Overall, results indicate clinically meaningful differences in reported utilization of video modeling from pre- to post-pilot. These findings suggest that the ACT SMART Toolkit yields behavioral changes in use of EBPs as reported by supervisors and director providers. Importantly, the ACT SMART Toolkit is the first implementation Toolkit designed specifically for community-based organizations providing services to children with ASD; these findings indicate the ACT SMART Toolkit may be an effective strategy to facilitate the uptake of EBPs in ASD-CBOs. Furthermore, these findings may inform the development and utilization of implementation guides more generally to facilitate the implementation of EBPs in various

contexts and in other fields. Overall, this project supports the broader utilization of implementation guides as a systematic method for EBP integration and implementation, in an effort to reduce the research-practice gap across different fields of work.

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AGEP Alumni Spotlight

A Conversation with Dr. Kristen J. Mills

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Dr. Kristen J. Mills (she/her) is a postdoctoral research fellow at Ohio State University in the College of Education and Human Ecology. She completed her PhD in Ecological Community Psychology at MSU and was a member of AGEP from 2012 -2019.

Note: this piece is an abbreviated version of the interview. You can [access the full transcript here](#).

Question 1: Tell us about your time with AGEP and how AGEP influenced your transition from MSU to other experiences at Ohio State.

KM: When I became a part of AGEP, *it was a place where my identity was affirmed* first and foremost, beyond the purpose of AGEP. [It was] A place where I got to see plenty of scholars of color that I didn't see in undergrad, or in my day to day life as a graduate student in our program and department. It was a place where it felt like power differentials between faculty members and students were lessened so we could ask real questions without fear of retaliation, fear for safety, or feeling like, "I'm supposed to know this and I don't know it." What I think was especially important for me at that time was that [AGEP] helped me workshop milestones, present on the beginning pieces of my thesis and get feedback from people with the best intentions, work on a teaching philosophy over and over again, those kinds of things.

I received the AGEP scholar award a couple times which allowed me to go to national and international conferences to present my research. Also, I received the King Chavez Parks Future Faculty Fellowship (KCP) through AGEP and that really allowed me to focus on my dissertation my last year. I had worked multiple jobs throughout most of my graduate school career, like up to four or five at a time. AGEP really allowed me to slow down and think about my trajectory.

[AGEP] also allowed me to informally mentor Black students, which was really moving. I didn't have those opportunities. I didn't have a mentor or anything like a mentor until I got to graduate school. My first mentoring relationship was my advisor. I had no idea how it was supposed to go. I think it [having a mentor prior] would have greatly influenced the way that I made it to graduate school and navigating graduate school.

AGEP helped me to transition here [to a postdoc] because it highlighted some of those things about faculty life that you want to pay attention to, some of the things that go on behind the scenes, and the documents you need to prepare for the job market. I think also going to Capitol Hill with AGEP helped me promote myself. I had to talk about myself and my research and that of my colleagues and also recruit students to Michigan State. It helped me like to practice what I wanted to say, what I thought was important, how to translate like my research to a broader scale and for broader impacts for people who don't necessarily care about my work.

Question 2: What has it been like to navigate a post-doc as a minoritized identity, particularly during this time?

KM: For some context...I was hired with a cohort of people of color, which I think makes my experience drastically different than others. *Not only did I come in with a community already, I came in with a community of people of color, which is just a different world.* So, it's been great to navigate a postdoc as a minoritized identity because I spend the most time with people who get it and get me. Like it's just, the whole collectivistic vibe. It's beautiful because of the culture that the Dean and the EDGE office have tried to create, it's been amazing.

I think particularly during this time with COVID, work from home culture has been tough because I really need to work hard to have work boundaries. It's also been tough not having that communal space to be energized by other people in doing work. It has also been tough because the expectations for us to produce have not been adjusted. I think that plenty of people can have empathy for others for what's going on right now. But if you aren't adjusting your expectations, you still feel like we have to produce. And particularly for me as a Black woman, I think consciously and subconsciously, I'm always thinking about how I need to present in order to look a certain way for this type of job or this type of position.

[During this time] It's been **helpful to do the things that feed me** whether it be my research or spending time with my family, spending time with my partner, and just taking time. Again, me and some of the postdocs are really close friends and so we hold each other accountable, we are able to support each other.

Question 3: Now that you are a postdoc, in a different position of power, how are you creating space for others to succeed?

KM: There are plenty of things as a postdoc that I am not required to do, but I do all of them. I attend department meetings. I attend our program/faculty meetings. This past year, I was a part of admissions, which was not at all a part of my job description, but I thought it was important as a woman of color, as a Black woman specifically, to be involved in that process...I was very actively involved in reviewing materials, and ranking students. What I do love is that there's a full student committee, and then all the faculty. We get together and we talk about all of the candidates. So it was very transparent, I'm making my voice heard and making sure honestly that if there are any students of color that are not being advocated for that I think were highly qualified to be in the program, then speaking up.

I had never taught a graduate student course beforehand... but it has been such a scary but amazing experience, particularly teaching **critical race theory** in higher ed during this presidential campaign and just, you know, all of the things. I think the ways in which I was able to foster a space for us to succeed in that class was facilitating a **truly authentic learning environment**. I communicated that from the beginning, similar to Nicole Buchanan that you are not being graded on how much you agree with me or if your opinions are the same as mine. **I know the students felt safe** to explore and engage in ways that were truly authentic to their experiences and their opinions. I also made sure that their assignments, their final assignments were something that served them in graduate school... They had multiple options where it served them and to think critically about the ways in which this could inform their work.

Also, **in faculty meetings**, just giving a feedback and identifying ways that we can be more transparent so that at least for some of those students who want to go into professoriate, it's clearer to them what this looks like on this end. Similar to what AGEF did for me. And I did look for an AGEF group when I came here, didn't find one, but that was one of the first things I searched for. Those are some of the ways. And I hope to have other opportunities to create space for others to succeed.

Question 4: In what ways are you mentoring/helping others?

KM: I'm not trying to be the mentor I've always wanted to be because I still don't know what that looks like. I think for me with the AGEF experiences that I've had thus far, **the most important thing is that a mentor is actually invested in me and actually cares what happens**, they're not just mentoring me on a topic and moving along, but they hear about how this is going to take shape in my life. It's important for people to know that they're valued before anything else. If somebody gives you the space to kind of develop and like stumble and grow, I think that's essential. I do strive to be more of a mentor in ways that I wish I would have received earlier or ways that I did not receive it, that I think would have been helpful. Yes. **But I don't have a model in my head about what the best mentoring looks like because I think it's different for every person. Everybody needs different things.**

Question 5: How are you balancing expectations to have really high-quality research alongside with diversity advocacy work?

I think as an advocate in diversity advocacy work, one thing that I'm learning is like the very first important step is to prioritize yourself. I think that is the first step because you can get lost in so much, especially if you're fighting hard to make something happen... you just deplete your reserves. What I did do when I came here was join the committee on equity, diversity and global engagement in my department immediately because I knew that I couldn't sustain the types of advocacy work that I did as a graduate student, but I still wanted to be a part of something. I think part of it is managing your own expectations of yourself, identifying what you can give, and then being a part of that.

I'm also **learning how to say no** to things or learning how to say yes and clarifying that my capacity will be limited because it's easy to get pulled in a thousand directions. Another point is

to streamline your stuff (i.e., teaching, research, service, and community engagement). Do it. All of this stuff should be connected in some way. I mean, of course some projects will be like tangential, but you need to find a common thread through all the things that you are doing that serve your larger life professional and personal goals.

Question 6: Finally, what did you take away from AGEP? Did AGEP inspire you to create similar communities at your institution?

My main take away from AGEP is to **FUND AGEP**. Fund it! It's a super important organization. It's not established at many institutions, at least not as widespread as I thought it would be. I think we say AGEP and we don't say the whole acronym often, but the Alliance piece is a major key because there are so many insights that I would not have if I didn't attend AGEP. There are so many friendships that I would not have if I didn't attend AGEP. The opportunity to present my research and develop as a scholar. I would have absolutely not had if I did not attend AGEP. I don't think it needs to be people's only community, but I think it is one piece of a mosaic of a community. AGEP does a lot for students of color and diversity scholars that institutions need to pay attention to and I think it is a safe place for people to develop...My main take away from AGEP is to fund it, it's necessary and needed. It will propel you into your career trajectory, whether that'd be the professoriate or not.

AGEP Faculty Spotlight

A Conversation with Dr. NiCole T. Buchanan

By Jessica S. Saucedo
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Dr. NiCole T. Buchanan is a Professor of Psychology at Michigan State University and a Licensed Clinical Psychologist. Her research focuses on ethnic minority health and well-being, and emphasizes the ways in which multiple social status dimensions (e.g., gender, race, age, social class) create unique experiences of victimization and contribute to education/occupational, economic, and health disparities across diverse groups. Through her research, teaching and mentoring, Dr. Buchanan strives to foster academic excellence by including diverse content into training materials and creating a learning environment that is inclusive for all students.



Note: this piece is an abbreviated version of the interview. You can [access the full interview here](#).

JS: If and how do you incorporate broadening participation work in your own research?

NB: If you look at my research portfolio, you'll see that the core of my research is very diverse. I'm looking at how do we not only have research that appeals to a diverse and broad audience, but also then who do we bring to the table to do the research on these topics. I deliberately try to reach out to a diverse body of students and graduates—that's on the undergraduate level and the graduate level—to ensure that people have the exposure that they would need to succeed in their careers. What is it like to do research? How might I do it? I try to help them see the possibility of what graduate school careers and faculty careers might offer them, and how they might be able to be successful.

JS: Are you able to balance your broadening participation work with the things you are required to do, such as work that went towards your tenure or that helped you advance in your career trajectory?

NB: I believe it can be a real challenge for most faculty that are doing diversity-related research to meet the kinds of requirements that are expected for promotion and tenure. This happens because of a number of different reasons, one of them being service. It is part of the trio of things that are valued for promotion and tenure, but it's often kind of the weak leg when it comes being evaluated. Often, faculty that have these [diverse] identities are pulled to do a lot

of additional research that isn't always attended to in faculty review processes. This includes having additional student loads, having additional students that come to them for periodic mentoring but they're not kind of their official mentee, and being asked to be on committees that are related to diversity, equity, and inclusion, for example. Although there is an expectation that faculty, and faculty of color in particular, will take on those roles, they aren't always valued in their promotion and review process. But, as somebody who is very committed to those, I want to do those anyway. I want to have them incorporated. I want them to be central to the work I do. Also, I try to make sure that the work that I do in and of itself has a component that sends the information back into the community that makes it available to a broader audience. Those aren't the kinds of things that typically count for promotion in tenure or for annual reviews for merit raises and things like that. In addition to the kind of service you do, being devalued and where you publish may be devalued, there's often an underlying bias on research that has to do with marginalized communities or in topics that are particular to marginalized groups. That research tends to be *me-search*, and so [faculty] are seen as less objective or less beneficial to science; that they are not advancing the field. They are only advancing things for this niche group, and they can be devalued within the evaluation process.

JS: Could you elaborate more on *me-search*? How did you learn about it?

NB: The basic idea is that [researchers], that as a science, we should be doing research in an objective, non-biased way; and that objectivity is what allows you to do good work. I'll use myself as an example. As a Black woman, my life experiences, the way I've been socialized, the things that are particular to my culture and my life experiences informs the position I have in the world, the things that I'm interested in, and naturally informs the research directions that I take. So, when you have research that's also directly connected to your identities, instead of seeing it as you have unique expertise that you bring into that research, it's often devalued as being objective and biased. It is thought that you're just engaging in research on yourself, which is why we go to the *me-search* piece. One, I think we can go back, and we can really take a good look at, "Is any research devoid of being *me-search*?" We may often use the example of the male doctor doing breast cancer research, but we've discovered that his grandmother and his mother had breast cancer and maybe passed away. That's all motivating his desire to do that research. We don't call that *me-search*, but it's very directly related to a core piece of their identity, a core piece of their lived experience informing their research interests. Because of their unique experiences related to breast cancer, they have a stake in the game that another person wouldn't have and wouldn't go in the direction of breast cancer research.

JS: Do you think that your broadening participation work influences who you collaborate with? Does it affect who you decide to take on as students?

NB: If a student has interests that align with mine, and we have the potential for a good working relationship, then I am happy to work with students of all backgrounds. If you look at the students I work with, that's absolutely a fact. My students cross genders, races, ethnicities, and sexual identities, as well as social class. When we have all the students kind of together at one, you really see that what ends up happening by having this broad and diverse group is that we actually have ideas that are better. They're more inventive and more innovative. When I think about who I'm working with, it is more about if the topic fits and if students are open to

my perspective. What often happens when working with students is that they're developing their scientific identity. They just have to be open to the frameworks and things I'm presenting; they don't have to kind of agree with me already...I also am specifically and intentionally creating space for students that are typically excluded from academia and are not welcomed in higher education. Some of this happens just by virtue of the topics I study.

There was a period of time where me and two other Black, female junior faculty had an interdisciplinary lab in the Psychology Department. We called it the Multiple Intersecting Identities Research Lab (Mii Lab), and we had students from across the Psychology Department. Anyone who is just interested in doing research related to race, broadly speaking, was welcome. We ended up having this amazing lab of students...representing diverse backgrounds. We had about 93% of those students go on to active research careers...a postdoc at top research institutions or that went into research think tanks. 93% of primarily Students of Color going on into the professoriate, into research careers... that's a game changer! I don't know anywhere where we can talk about numbers like that. I think that was very deliberate because our lab offered the safe space for a lot of the professional development work that students may not always get, and for the interdisciplinary and diverse thinking that we brought together, as well as just this supportive space where they knew you can do this kind of research and be successful; and here are some the skills to do it really well and you can create collaborations where every piece of what you bring to the table is welcomed, valued and wanted. I think having that protection in graduate school really helps them decide whether they want to go on into a research career or not.

JS: I'm so sorry to hear that it doesn't exist anymore. Why is this?

NB: It was made clear that [one of the faculty members] would not receive tenure, and so she left. Then another one of the faculty members was recruited to another well-funded, well-endowed institution and was given an offer no one would refuse. What's important here, what happened, is that she received this amazing offer with promotion as a full professor where her salary increased, the prestige, the value... every piece of this new appointment was validating and demonstrating a welcome desire for who she was as a person, as an academic, and as a scholar. Unfortunately, that's not been the experience that our [colleague] trio had had in the institution we're in. Looking to faculty and finding out where they feel valued, what happens during their career that conveys to them that they are valuable, that the research they're doing is welcomed and is good—where is that not happening? This is an important piece of how we recruit and retain faculty. Being in one position where she was devalued, and then being offered another position where every piece of the experience is communicating that [the other research institution] wants you and loves what you do...there is no question about whether or not she would stay or go. I think that's another piece we really want to look at if we want to really change academia. It's going to change the way we value or devalue people.

JS: In what ways do you think that institutions, departments, and programs can better support Faculty of Color and diverse faculty and not contribute to their attrition?

NB: If we look at MSU, where we lost faculty was really when they were in their mid-career. Many, many people have left over the last 10 years. Not even full 10 years, maybe 7 or 8 years.

There's been this hemorrhaging that's been going on, and part of it is that none of the best practices for research are being followed. We know that people need to be adequately compensated, so when we have disparities in pay and when people go elsewhere and start to look for jobs... people go on the job market to see if they can find something better, but that means they've already had to do some things to disengage from where they're [currently] at. When you find something better, you begin to become even more critical of where you're at. So, rather than making people go out into the job market and be recruited and have all these places that turn out to really love what they do and want them, create that here! Create a way for faculty to be treated and compensated, so that it's not even going to be a desire to go outside of the institution to find something else.

The College of Arts and Letters has been working with my research team and taking up this issue around epistemic exclusion. They're looking at their hiring, review, and promotion and tenure practices to try and reduce the impact of epistemic exclusion on these processes. So, how do we begin to change our communication about our values and research? How do we become a place that truly is validating and inclusive of these research topics that often are non-traditional? [Diverse faculty] are not going to be within the center of a discipline. They tend to be non-traditional because of their interests, backgrounds, and lived experiences influencing the kind of work that they put out. I'm very excited for what that work has the potential to lead to because epistemic exclusion happens a lot in formal ways around evaluation, but it also happens in informal ways. How are people promoted?...And not in the sense of their formal promotion. When people get grants or publications, who's highlighted? Who's on the website? Whose accomplishments or their new awards don't ever get any recognition? What kind of publication venues are we valuing and are those publication venues that actually accept the kind of work that these diverse colors are doing, or do they not include that?

JS: Were you able to go through the tenure process while continuing your broadening participation work without getting burnt out? If you were able to, how? If not, why not?

NB: You know, there was a really difficult few years in there where my productivity was really low. I wrote about my research experiences in my article, "Researching while Black and Female". At some point, I realized I was getting messages not to collaborate with the other Black junior faculty member that did research on Black women. We began talking and turns out she was being told the same thing about working with me. We were both kind of being damaged and harmed reputationally, but also why would [others] discourage people from working with the person that does the work that they do in the same Department? In having an honest conversation about what was happening, we decided that it's enough. We started working together, and the collaboration has been amazing ...not only because of the work we did, but even the psychological boost it had from having somebody that understood what I was doing. That was encouraging. I was excited about the work. I had validating comments about the work. That all means a lot.

Notes

This image shows a full page of blank, lined paper. It features approximately 20 evenly spaced horizontal black lines across its entire width, providing a guide for handwriting or typing. The background is a solid off-white color.

Notes

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

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What is MSU SROP?



The Summer Research Opportunities Program (SROP) is a gateway to graduate education at Big Ten Academic Alliance universities. The goal of the program is to increase the number of underrepresented students who pursue graduate study and research careers. SROP helps prepare undergraduates for graduate study through intensive research experiences with faculty mentors and enrichment activities.

The MSU SROP Program provides an opportunity to combine professional development with applied work experience in your career field. This is also an opportunity for Michigan State University faculty to evaluate you as a potential graduate student. MSU SROP typically convenes the third weekend of May and ends in the last weekend of July.

Program Benefits

- An opportunity to conduct research at one of the country's largest and most scenic academic research universities
- A generous stipend for the summer
- Free room and board on MSU's campus
- Paid travel to/from East Lansing
- Opportunities to present research locally and regionally
- An opportunity to interact with successful role models who have earned advanced degrees

In the scenario that the program cannot occur in person, all research and professional development activities are adapted to a virtual environment.

Eligibility and How to Apply

- U.S. citizen or permanent resident
- Enrolled in a degree-granting program at a college/university in the U.S.
- Cumulative GPA of 3.0 or higher
- Have completed at least 2 semesters of undergraduate education
- Have at least 1 semester of undergraduate education remaining after completing MSU SROP
- Demonstrate a strong interest in graduate study (Masters or Ph.D.)

For more information

Please write to us at: msusrop@grd.msu.edu

Visit us online at: <http://www.grad.msu.edu/SROP>

What is MSU AGEP?



The Alliance for Graduate Education and the Professoriate (AGEP) at Michigan State University (MSU) is a National Science Foundation program that **supports recruitment, retention, and graduation of U. S. students in doctoral programs of the natural and social sciences, mathematics, and engineering.** AGEP places special emphasis on fostering a fully inclusive recruitment and the development of students from U.S. population groups historically underrepresented in fields of the sciences, technology, engineering and mathematics (STEM); and the social, behavioral, and economic (SBE) sciences.

A goal of AGEP is to promote changes that transform U.S. universities to embrace the responsibility of substantially increasing the number of underrepresented U.S. minorities who will enter the professoriate in STEM and SBE disciplines. Graduate students, post-docs and faculty who participate in building the AGEP Community at MSU will provide a key to changing the culture of U.S. colleges and universities to embrace building worldclass STEM and SBE faculty members who fully reflect the diversity in race, gender, culture and intellectual talent of the U.S. population. We have a range of academic and professional development resources including monthly community meetings, Fall/Spring academic Conferences, AGEP Scholar Award funds for research, networking panels, and opportunities for outreach, science advocacy as well science literacy training for the public. You can follow us on [Twitter](#), [Facebook](#), and [Instagram](#) and request to be added to our list-serve by emailing the MSU AGEP Program Director, Steven Thomas at msuagep@grd.msu.edu

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This material is based upon work supported by the National Science Foundation under The Michigan AGEP Alliance for Transformation (MAA): Mentoring and Community Building to Accelerate Successful Progression into the Professoriate # 1305819. Any opinions, findings, and conclusions or recommendations expressed in this material are those of The Graduate School at MSU and do not necessarily reflect the views of the National Science Foundation.