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Retention Rates in Medication for Opioid Treatment: The Effects of Social Determinants of Health

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Retention Rates in Medication for Opioid Treatment: The Effects of Social Determinants of Health

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Retention Rates in Medication for Opioid Treatment: The Effects of Social Determinants of Health

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Abstract

Background. Medication for opioid use disorder (MOUD), the use of pharmacotherapy, behavior, and psychotherapy, has been implemented in the treatment of opioid use disorders. MOUD seeks to retain patients in treatment to stabilize medication management and implement coping skills, and many studies have described an association between retention and recovery. Social Determinants of Health (SDH) are important to consider in efforts toward retention in MOUD programs. **Method.** The purpose of this study is to analyze the effects of SDH on retention rates in MOUD, specifically evaluating a program that uses a Collaborative Community Approach Model (CCAM), which aims to address SDH. **Results.** Regression results indicated that only number of behavioral health intervention visits significantly predicted total number of MOUD visits attended, and that telehealth modality was not a significant predictor of treatment engagement. **Conclusions.** These results are contrary to findings from past research, as they did not indicate a significant relationship between SDH risk factors and treatment engagement for this population in a CCAM MOUD program. This finding may suggest that CCAM MOUD programs in integrated care settings may be able to reduce disparities by implementing an approach that addresses SDH.

Keywords: opioid use disorder, medication for opioid use disorder, opioid intervention retention, social determinants of health

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Chapter 1

The opioid epidemic is a public health crisis, affecting people across all demographics, socioeconomic class, and sexual orientation. In 2017, the United States Department of Health and Human Services estimated that at least 2 million people had an opioid use disorder (OUD) involving prescription opioids, and almost 600,000 had an OUD associated with heroin (Substance Abuse and Mental Health Services Administration [SAMHSA], n.d.). The opioid epidemic has led government agencies, health care systems, and communities to collaborate in an effort to address the crisis.

Medication for Opioid Use Disorder

Medication for opioid use disorder (MOUD) is the use of pharmacotherapy, behavior, and psychotherapy to help treat opioid use disorders (SAMHSA, n.d.). MOUD typically occurs in primary care settings and outpatient services, where qualifying clinics or hospitals predominantly administer buprenorphine products (namely buprenorphine/naloxone combination) or methadone. The study of opioid treatment in primary care settings is essential to addressing the opioid epidemic.

Type of medication administered has been a focus of research in MOUD. Food and Drug Administration (FDA)-approved medications for opioid dependence include naltrexone, buprenorphine, and methadone (SAMHSA, n.d.). Research suggests, methadone has the most significant evidence for long-term recovery, having been around the longest (Oesterle et al., 2019). In addition, methadone clinics typically require the greatest amount of structure, including dose administration and expectations for engagement in psychiatry and counseling. However,

rigid structure and regulations may not be conducive to individuals impacted by psychosocial factors and who are in active recovery.

Psychological Approaches in MOUD

Evidence-based psychological approaches for treating substance abuse include contingency management therapy (CM), cognitive-behavioral therapy, and motivational interviewing (Timko et al., 2016). Most interventions target substance misuse behaviors, identify triggers for abuse, and work through associated maladaptive emotions and cognitions. However, previous researchers found that behavioral intervention alone has limited efficacy for OUD treatment, due to the complexity of symptomatology and physical aspects of OUD (Sofuoglu et al., 2019). Psychological intervention combined with medication assistance showed the best outcomes, typically identified by abstinence or reduction in substance abuse, and improvement in daily functioning.

Predictors of Retention

Due to the complex, multifaceted factors of substance abuse, adherence to recovery programs and attrition rates have been a long-standing challenge to providers. Yet, positive outcome studies demonstrate that longer retention times in MOUD correspond with increased stabilization of participants, improvements in social functioning, reduction in mortality, and improvements in quality of life (Feelemyer et al., 2014). Drop-rates are often a significant predictor of relapse. A systematic review led by Timko et al. (2016) and colleagues, found wide variability in retention rates among opiate-dependent patients in MOUD. Factors associated with retention in MOUD, included whether patients received pharmacotherapy instead of a placebo or no medication, and whether patients received CM therapy, finding that retention was best for those who received medication treatment and CM therapy (Timko et al., 2016). Strategies for

substance abuse treatment and MOUD often aim to keep patients in treatment long enough to stabilize medication management and implement coping skills. This study seeks to explore how engagement with behavioral health (psychotherapy) influences MOUD retention. In addition, while existing research has focused on medication-type and the effectiveness of psychosocial interventions, there is more work to be done in considering the impact of social determinants of health (SDH).

Social Determinants of Health and Retention

SDH are biopsychosocial components that make up a person's health and health trajectory; they include factors such as genetics, behavior, environment, education, support, and safety (Centers for Disease Control and Prevention, 2021). Retention in health intervention programs is impacted by individual and systems factors including SDH (Powell et al., 2016). Further, retention rates in health intervention programs have been found to be influenced by multi-layered factors such as employment (McElrath, K., 2018), support (National Institute on Drug Abuse [NIDA], 2020), and psychosocial intervention (Timko et. al, 2016). However, there seems to be a literature gap on the specific effects of the SDH on retention rates in MOUD. Studies tended to focus on retention rates by comparing medications rather than looking at a combination of biopsychosocial factors. Marcovitz et al. (2016) found that attrition in MOUD was associated with factors such as opioid use in the first month of treatment, age under 25 years, unemployment, chronic pain, and whether it was the first time receiving opioid agonist treatment. The NIDA lists common factors typically associated with substance abuse treatment retention and engagement including degree of support, employment status, involvement with the criminal justice system, involvement with family and child protection services, and within

systems positive relationships between providers and patents (2020). These findings suggest that SDH involve psychosocial factors that impact patients' ability to receive and access care.

SDH Barriers Within MOUD Models

While not all MOUD treatments and facilities are the same, McElrath (2018) calls the majority of MOUD treatments *high threshold, low tolerance models*. High threshold refers to rigid criteria for admission, long wait times, excessive fees, and limited treatment availability in geographic locations. Low tolerance refers to hyper-supervision, punishment for patients that miss appointments, urinalysis results that lead to punishment, and reinforcement of shame and "addict" identities. These factors have substantial implications for recovery and retention rates when SDH are not properly addressed.

Traditional practice in MOUD involved in-person office visits. However, in response to COVID-19, many clinics and hospitals had to expand access beyond in-person care, implementing MOUD and psychotherapy services via telehealth. The increased use of telehealth as a modality increased patient access to care (Hughto et al., 2021). In order to further address SDH barriers, clinics have started to integrate community outreach. For example, the collaborative community approach model (CCAM) of care emphasizes a person-centered approach working collectively with community partners to meet the needs of individuals, including assistance addressing needs such as housing and peer support, serving as a liaison with schools and other local agencies, and assisting with access to community resources.

Present Study

The current study explored the implementation of a CCAM-informed MOUD program within integrated care in a regional health system in the Pacific Northwest. This study sought to explore three influences on MOUD treatment engagement: engagement with behavioral health

(psychotherapy), the presence of SDH risk factors, and engagement in telehealth services in the context of this CCAM-informed MOUD program. The hypotheses are as follows:

H1: Treatment engagement (number of MOUD appointments attended) will be predicted by engagement with MOUD-related behavioral health intervention (BHI; as measured by number of BHI appointments scheduled).

H2: Treatment engagement (number of MOUD appointments attended) will be predicted by SDH risk factors such as tobacco use, housing stability, food security, access to reliable transportation, financial strain and stability (e.g. consistent resources to cover utilities), insurance carrier, interpersonal physical and emotional safety, employment status, and family/community resource support and social support (as measured by the Accountable Health Communities Health Related Social Needs Screening Tool Core Questions, see Appendix A).

H3: Treatment engagement (number of MOUD appointments attended) will be predicted by number of telehealth appointments scheduled.

Chapter 2

Methods

The data for this study was gathered from an archival database using participants electronic medical records. This data was collected at a CCAM-informed regional health system MOUD clinic in the Pacific Northwest region of the United States. The archival data for this study were collected between 2021 and 2022.

Participants

Participants consisted of 77 adults with opioid use disorder, engaged in MOUD, and using buprenorphine as part of their treatment. Participants ranged in age from 18–66 years with

50.6% identifying as female (*n* = 39), 46.8% identifying as male (*n* = 36), and 2.6% identifying as transgender (*n* = 2). Of the participants, 58.4% indicated they were single (*n* = 45), 22.1% were divorced (*n* = 17), 18.2% were married (*n* = 14), and 1.3% were widowed (*n* = 1). All participants reported their primary language was English. White participants made up 94.8% of the sample (*n* = 73), followed by 2.6% who reported they were multiracial (*n* = 2), 1.3% who indicated they were Hispanic/Latino (*n* = 1), and 1.3% who declined to answer (*n* = 1).

Measures

Accountable Health Communities Health Related Social Needs Screening Tool Core Questions

In order to identify factors that are associated with biological and social aspects of retention rates in medication for opioid use disorder, archival information from the Accountable Health Communities Health Related Social Needs Screening Tool Core Questions (AHC HRSN) were used (see Appendix A). The AHC HRSN is a 26-item screening tool to explore patient needs including tobacco use, housing stability, food security, access to reliable transportation, financial strain and stability (e.g., consistent resources to cover utilities), interpersonal physical and emotional safety, and family/community resource support and social support.

Procedure

In addition to AHC HRSN data, this study gathered demographic information including age, gender, ethnicity, marital status, language, employment status, and insurance carrier. In addition, data gathered included number of appointments scheduled, number of virtual appointments scheduled, number of in-person appointments scheduled, number of BHI appointments scheduled, number of no-shows, number of patient cancellations, and reasons for patient cancellations. MOUD treatment engagement was calculated based on total MOUD

appointments attended (both virtual and in-person) over the study period. Engagement with behavioral health services was calculated based on total MOUD-related BHI appointments attended. Cancellation ratio was calculated based on number of patient cancellations divided by total MOUD appointments scheduled (both virtual and in-person) over the study period. Virtual ratio was calculated by number of virtual appointments scheduled divided by number of total appointments scheduled.

Chapter 3

Results

Variables

SDH variables including tobacco use, housing stability, food security, access to reliable transportation, financial strain and stability (e.g., consistent resources to cover utilities), insurance carrier (Medicaid, Medicare, commercial, or private), interpersonal physical and emotional safety, employment status, and family/community resource support and social support were categorized into *low*, *moderate*, and *high risk* (see Table 1).

Table 1

Categorization of SDH Responses into Risk Categories

	Low risk	Medium risk	High risk
Tobacco use	Never smoker, former smoker, light smoker	Some days smoker	Everyday smoker
Housing stability	Housed	N/A	Houseless, unstable housing
Food security (if one item was medium or high risk, they were categorized as such)	Never true- AHC HRSN items 3 or 4	Sometimes true- AHC HRSN items 3 or 4	Often true- AHC HRSN items 3 or 4
Access to reliable transport	Never true- AHC HRSN item 5	If there was an appointment cancellation due to	Often true- AHC HRSN item 5

	Low risk	Medium risk	High risk
		transportation difficulty.	
Financial strain and stability (e.g. consistent resources to cover utilities)	No- AHC HRSN item 6	Yes- AHC HRSN item 6	Already shut off- AHC HRSN item 6
Interpersonal physical and emotional safety (if one item was medium or high risk, they were categorized as such)	Never or rarely- AHC HRSN items 7-10	Sometimes- AHC HRSN items 7-10	Fairly often or frequently- AHC HRSN items 7-10
Insurance carrier	Commercial, private		Medicaid, Medicare
Employment status	Employed, self-employed	N/A	Unemployed
Family/community resource support and social support (if one item was medium or high risk, they were categorized as such)	I don't need any help, I get all the help I need- AHC HRSN item 13; Never or rarely- AHC HRSN item 14	I could use a little more help- AHC HRSN item 13; Sometimes- AHC HRSN item 14	I need a lot more help- AHC HRSN item 13; Often or always- AHC HRSN item 14

Note. AHC HRSN = Accountable Health Communities Health Related Social Needs Screening Tool Core Questions.

A point system was assigned for each category using the following values: 0 points for *low risk*, 1 point for *moderate risk*, and 2 points *high risk*. The categories were assigned a point value to determine an estimated SDH summary value for individuals.

Descriptives and Normality

All analyses were conducted using the Statistical Package for the Social Sciences (version 27.0). Descriptives for study variables are provided in Table 2, including normality and homogeneity of variance. All of the study variables had a non-normal distribution.

Table 2

Descriptive Statistics

Variable	*n* Low Risk	*n* Mod. Risk	*n* High Risk	*Mdn*	*SD*	Normality (Kolmogorov-Smirnov *p*-value)
MOUD Treatment Engagement (# MOUD Appts Attended)	-	-	-	11.000	7.247	.200
# BHI Appts Scheduled	-	-	-	2.000	5.406	.000
Virtual Ratio	-	-	-	.333	0.338	.005
Cancellation Ratio	-	-	-			
ACH Tobacco Use	44	9	24	2.000	1.099	.000
ACH Housing Stability	61	-	16	1.000	0.408	.000
ACH Food Security	55	14	8	.000	0.672	.000
ACH Transportation	49	18	10	.000	0.719	.000
ACH Utilities	61	11	5	.000	0.577	.000
ACH Interpersonal Safety	25	11	4	2.000	1.838	.000
ACH Family Community Support	48	24	5	.000	0.618	.000
Employment Status	42	-	30	1.000	0.620	.000
Insurance	26	-	51	1.000	0.934	.000
SDH Sum	-	-	-	6	3.91	

Note. BHI=behavioral health integration, MOUD= medication for opioid use disorder, SDH= social determinates of health

Hypotheses 1 and 2

A single stepwise multiple linear regression was conducted including all predictor variables (BHI engagement from Hypothesis 1, SDH variables from Hypothesis 2, and appointment modality from Hypothesis 3), to determine which were predictors of MOUD treatment engagement (total number of MOUD visits attended). SDH variables were each categorized into *low risk* (0 points), *moderate risk* (1 point), and *high risk* (2 points) categories.

SDH variables were then summed to create SDH Sum, included in this analysis. Telehealth appointment modality was measured by a ratio of number of telehealth appointments scheduled to total number of appointments scheduled.

Regression results indicated that only number of BHI visits significantly predicted total number of MOUD visits attended ($R^2 = .417$, $R^2_{Adj} = .409$, $F(1, 70) = 50.045$, $p < .001$, $power > .999$). The number of BHI visits accounted for 41.7% of the variance in total number of MOUD visits attended. A summary of the regression model is presented in Table 3. In addition, bivariate and partial correlation coefficients between each predictor and the dependent variable are presented in Table 4.

Table 3

Model Summary

	R	R^2	R^2_{adj}	ΔR^2	F_{chg}	p	df_1	df_2
# BHI Appts Scheduled	.646	.417	.409	.417	50.045	< .001	1	70

Note. BHI = behavioral health intervention.

Table 4

Coefficients for Final Model

	B	β	t	Bivariate r	Partial r
# BHI Appts Scheduled	0.859	0.646	7.074	.646	.646

Note. BHI = behavioral health intervention.

Hypothesis 3

A single stepwise linear regression was conducted to determine if treatment engagement (number of MOUD appointments attended) was predicted by telehealth appointment modality (as measured by the ratio of number of telehealth appointments scheduled to total number of

appointments scheduled). Regression results indicated that telehealth appointment modality was not a significant predictor of treatment engagement ($R^2 = .037$, $R^2_{Adj} = .024$, $F(1, 75) = 2.9$, $p = .093$, $power = .5$). Telehealth appointment modality accounted for 3.7% of the variance in total number of MOUD visits attended. A summary of the regression model is presented in Table 5. In addition, bivariate and partial correlation coefficients between each predictor and the dependent variable are presented in Table 6.

Table 5

Model Summary

	R	R^2	R^2_{adj}	ΔR^2	F_{chg}	p	df_1	df_2
Telehealth Appt. Modality	.193	.037	.024	.037	2.9	.093	1	75

Table 6

Coefficients for Final Model

	B	β	t	Bivariate r	Partial r
Telehealth Appt. Modality	4.136	2.429	1.703	.193	.193

Chapter 4

Discussion

Addressing the opioid epidemic requires a multifaceted and integrated approach. McElrath (2018) described some approaches to MOUD as high threshold and low tolerance, with barriers including long wait times, excessive fees, punishment for positive toxicology reports, or reinforcement of shame around addict identities. MOUD programs such as these might be overlooking important social factors that could be influencing patient ability to engage in treatment. A study conducted by Powell et al. (2016) identified SDH as one of three domains that

represent barriers to patient care in interdisciplinary health systems. MOUD programs utilizing an integrated health model and the CCAM approach offer an opportunity to address patient's health barriers and mental health needs. This current study is a program evaluation of a CCAM-informed MOUD program, which sought to explore three influences on MOUD treatment engagement: engagement with behavioral health (psychotherapy), the presence of SDH risk factors, and engagement in telehealth services in the context of this CCAM-informed MOUD program.

MOUD and SDH Results

Treatment Engagement in MOUD and Behavioral Health Services

Results indicated that treatment engagement in behavioral health intervention predicted number of MOUD appointments attended. While this finding cannot be used to infer causality, it does suggest a positive relationship between BHI engagement and MOUD retention. These findings commensurate with Timko et al. (2016) systematic study findings that suggest retention was best for those who received medication treatment and CM therapy. Additionally, this sentiment is further illustrated by Dugosh et al. (2016) whose results touted the general effectiveness of providing psychosocial interventions in conjunction with medications to treat opioid addictions. Past and previous research demonstrate an encouraging perspective that integrated behavioral health services in MOUD may help facilitate treatment engagement.

Treatment Engagement in MOUD and SDH

Contrary to findings from past research (Powell et al., 2016; NIDA, 2020; Marcovitz et al. 2016), results from this study did not indicate a significant relationship between SDH risk factors and treatment engagement. This may be due to the fact that this MOUD program utilizes an integrated care approach and the CCAM model to address SDH risk factors. While many

medical/health systems have multidisciplinary team members, programs with integrated behavioral health services have a unique opportunity to "normalize" psychological intervention, reduce barriers to access mental health services, and position behavioral health clinicians as care team members to assist in patient treatment planning. Additionally, the CCAM model is a patient-centered initiative that allows medical/health centers to partner with community services to meet the needs of individuals, including addressing needs such as housing, offering peer support, serving as a liaison with schools and other local agencies, assisting with access to food pantries, coordinating with transportation services, or connecting individuals with other community resources. It is possible that MOUD programs that utilize an integrated approach and CCAM model can address SDH risk factors and mitigate barriers to treatment engagement.

Treatment Engagement and Telehealth Services

Findings indicated that those who scheduled telehealth appointments were no more likely to have completed appointments than those who scheduled in-person appointments. Past research suggested up to a 10% increase in retention rate with telehealth appointment availability (Hughto et al., 2021). A possible reason that a telehealth modality did not increase is the way telehealth appointments are traditionally offered within this MOUD program. Individuals who are in early stages of their recovery and MOUD are often encouraged to have more frequent in-person appointments, whereas someone who is generally stable might have more opportunities for less frequent appointments with telehealth.

Implications

CCAM-informed MOUD programs with integrated behavioral health services are uniquely positioned to address health barriers that might impact OUD treatment engagement. By using a CCAM model and integrated approach to MOUD patients may be better supported to

connect with community resources, and receive psychotherapy intervention. OUD is a multilayered issue that warrants a dynamic response. Overall, these results provide helpful knowledge on how to address SDH risk factors that could be impacting a patients treatment engagement.

Limitations and Future Research

A limitation of the current study is the use of a clinical archival data set. Future research is needed to determine if a positive relationship between BHI engagement and MOUD retention is moderated by a third variable that predicts overall treatment compliance and appointment attendance. Future research may also benefit from exploring differences in SDH variables from MOUD intake to the end of MOUD treatment, including a control group, to determine program effectiveness in addressing SDH risk factors for the patients served. Another limitation to the current study was the data available for telehealth. Future studies may explore differences in telehealth engagement for MOUD treatment versus a control group who were only completing visits in person.

Conclusion

The current study explored the implementation of a CCAM and integrated care MOUD program in a regional health system in the Pacific Northwest. Regression results indicated that only number of BHI visits significantly predicted total number of MOUD visits attended and number of BHI visits accounted for 41.7% of the variance in total number of MOUD visits attended. Additional, regression results indicated that telehealth appointment modality was not a significant predictor of treatment engagement. This study provides valuable insight into how to address health barriers in MOUD that could be impacting patient engagement. CCAM-informed

MOUD programs that integrate behavioral health services may be in a unique position to mitigate SDH factors that influence OUD treatment.

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Appendix A

AHC HRSN Screening Tool Core Questions

If someone chooses the underlined answers, they might have an unmet health-related social need.

Living Situation

1. **What is your living situation today?**[3]
   - ☐ I have a steady place to live
   - ☐ I have a place to live today, but **I am worried** about losing it in the future
   - ☐ I do not have a steady place to live (I am temporarily staying with others, in a hotel, in a shelter, living outside on the street, on a beach, in a car, abandoned building, bus or train station, or in a park)

2. **Think about the place you live. Do you have problems with any of the following?**[4]
   CHOOSE ALL THAT APPLY
   - ☐ Pests such as bugs, ants, or mice
   - ☐ Mold
   - ☐ Lead paint or pipes
   - ☐ Lack of heat
   - ☐ Oven or stove not working
   - ☐ Smoke detectors missing or not working
   - ☐ Water leaks
   - ☐ None of the above

Food

Some people have made the following statements about their food situation. Please answer whether the statements were OFTEN, SOMETIMES, or NEVER true for you and your household in the last 12 months. [5]

3. **Within the past 12 months, you worried that your food would run out before you got money to buy more.**
   - ☐ Often true
   - ☐ Sometimes true
   - ☐ Never true

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4. **Within the past 12 months, the food you bought just didn't last and you didn't have money to get more.**
   - ☐ Often true
   - ☐ Sometimes true
   - ☐ Never true

Transportation

5. **In the past 12 months, has lack of reliable transportation kept you from medical appointments, meetings, work or from getting things needed for daily living?[6]**
   - ☐ Yes
   - ☐ No

Utilities

6. **In the past 12 months has the electric, gas, oil, or water company threatened to shut off services in your home?[7]**
   - ☐ Yes
   - ☐ No
   - ☐ Already shut off

Safety

Because violence and abuse happens to a lot of people and affects their health we are asking the following questions. [8]

7. **How often does anyone, including family and friends, physically hurt you?**
   - ☐ Never (1)
   - ☐ Rarely (2)
   - ☐ Sometimes (3)
   - ☐ Fairly often (4)
   - ☐ Frequently (5)

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[6] National Association of Community Health Centers and Partners, National Association of Community Health Centers, Association of Asian Pacific Community Health Organizations, Association OPC, Institute for Alternative Futures. (2017). PRAPARE. http://www.nachc.org/research-and-data/prapare/

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8. **How often does anyone, including family and friends, insult or talk down to you?**
   - ☐ Never (1)
   - ☐ Rarely (2)
   - ☐ Sometimes (3)
   - ☐ Fairly often (4)
   - ☐ Frequently (5)

9. **How often does anyone, including family and friends, threaten you with harm?**
   - ☐ Never (1)
   - ☐ Rarely (2)
   - ☐ Sometimes (3)
   - ☐ Fairly often (4)
   - ☐ Frequently (5)

10. **How often does anyone, including family and friends, scream or curse at you?**
    - ☐ Never (1)
    - ☐ Rarely (2)
    - ☐ Sometimes (3)
    - ☐ Fairly often (4)
    - ☐ Frequently (5)

A score of 11 or more when the numerical values for answers to questions 7-10 are added shows that the person might not be safe.

AHC HRSN Screening Tool Supplemental Questions

Financial Strain

11. How hard is it for you to pay for the very basics like food, housing, medical care, and heating? Would you say it is:[9,]

- ☐ Very hard
- ☐ Somewhat hard
- ☐ Not hard at all

Employment

12. Do you want help finding or keeping work or a job?[10]

- ☐ Yes, help finding work
- ☐ Yes, help keeping work
- ☐ I do not need or want help

Family and Community Support

13. If for any reason you need help with day-to-day activities such as bathing, preparing meals, shopping, managing finances, etc., do you get the help you need?[11]

- ☐ I don't need any help
- ☐ I get all the help I need
- ☐ I could use a little more help
- ☐ I need a lot more help

14. How often do you feel lonely or isolated from those around you?[12]

- ☐ Never
- ☐ Rarely
- ☐ Sometimes
- ☐ Often
- ☐ Always

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9 Hall, M. H., Matthews, K. A., Kravitz, H. M., Gold, E. B., Buysse, D. J., Bromberger, J. T., . . . Sowers, M. (2009). Race and Financial Strain are Independent Correlates of Sleep in Midlife Women: The SWAN Sleep Study. Sleep, 32(1), 73-82. doi:10.5665/sleep/32.1.73

10 Identifying and Recommending Screening Questions for the Accountable Health Communities Model (2016, July) Technical Expert Panel discussion conducted at the U.S. Department of Health and Human Services, Centers for Medicare & Medicaid Services, Baltimore, MD.

11 Kaiser Permanente. (2012, June). Medicare Total Health Assessment Questionnaire. Retrieved from https://mydoctor.kaiserpermanente.org/ncal/Images/Medicare%20Total%20Health%20Assessment%20Questionnaire_tcm75-487922.pdf

12 Anderson, G. Oscar and Colette E. Thayer. Loneliness and Social Connections: A National Survey of Adults 45 and Older. Washington, DC: AARP Research, September 2018. https://doi.org/10.26419/res.00246.001

Education

15. Do you speak a language other than English at home?[13]

- ☐ Yes
- ☐ No

16. Do you want help with school or training? For example, starting or completing job training or getting a high school diploma, GED or equivalent.[14]

- ☐ Yes
- ☐ No

Physical Activity

17. In the last 30 days, other than the activities you did for work, on average, how many days per week did you engage in moderate exercise (like walking fast, running, jogging, dancing, swimming, biking, or other similar activities)?[15]

- ☐ 0
- ☐ 1
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5
- ☐ 6
- ☐ 7

18. On average, how many minutes did you usually spend exercising at this level on one of those days?[16]

- ☐ 0
- ☐ 10
- ☐ 20
- ☐ 30
- ☐ 40
- ☐ 50
- ☐ 60

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[13] United States, US Census Bureau. (2017). American Community Survey. Retrieved from https://www.census.gov/programs-surveys/acs/

[14] Identifying and Recommending Screening Questions for the Accountable Health Communities Model (2016, July) Technical Expert Panel discussion conducted at the U.S. Department of Health and Human Services, Centers for Medicare & Medicaid Services, Baltimore, MD.

[15] Coleman, K. J., Ngor, E., Reynolds, K., Quinn, V. P., Koebnick, C., Young, D. R., . . . Sallis, R. E. (2012). Initial Validation of an Exercise "Vital Sign" in Electronic Medical Records. Medicine and Science in Sport and Exercise, 44(11), 2071-2076. doi:10.1249/MSS.0b013e3182630ec1

[16] Ibid

- ☐ 90
- ☐ 120
- ☐ 150 or greater

Follow these 2 steps to decide if the person has a physical activity need:

1. Calculate ["number of days" selected] x ["number of minutes" selected] = [number of minutes of exercise per week]
2. Apply the right age threshold:
   - Under 6 years old: You can't find the physical activity need for people under 6.
   - Age 6 to 17: Less than an average of 60 minutes a day shows an HRSN.
   - Age 18 or older: Less than 150 minutes a week shows an HRSN.

Substance Use

The next questions relate to your experience with alcohol, cigarettes, and other drugs. Some of the substances are prescribed by a doctor (like pain medications), but only count those if you have taken them for reasons or in doses other than prescribed. One question is about illicit or illegal drug use, but we only ask in order to identify community services that may be available to help you. [17]

19. How many times in the past 12 months have you had 5 or more drinks in a day (males) or 4 or more drinks in a day (females)? One drink is 12 ounces of beer, 5 ounces of wine, or 1.5 ounces of 80-proof spirits.

- ☐ Never
- ☐ Once or Twice
- ☐ Monthly
- ☐ Weekly
- ☐ Daily or Almost Daily

20. How many times in the past 12 months have you used tobacco products (like cigarettes, cigars, snuff, chew, electronic cigarettes)?

- ☐ Never
- ☐ Once or Twice
- ☐ Monthly
- ☐ Weekly
- ☐ Daily or Almost Daily

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[17] United States, U.S. Department of Health and Human Services, National Institutes of Health. (n.d.). Helping Patients Who Drink Too Much: A Clinician's Guide (2005 ed., pp. 1-34).

21. How many times in the past year have you used prescription drugs for non-medical reasons?

- ☐ Never
- ☐ Once or Twice
- ☐ Monthly
- ☐ Weekly
- ☐ Daily or Almost Daily

22. How many times in the past year have you used illegal drugs?

- ☐ Never
- ☐ Once or Twice
- ☐ Monthly
- ☐ Weekly
- ☐ Daily or Almost Daily

Mental Health

23. Over the past 2 weeks, how often have you been bothered by any of the following problems?[18]

a. Little interest or pleasure in doing things?

- ☐ Not at all (0)
- ☐ Several days (1)
- ☐ More than half the days (2)
- ☐ Nearly every day (3)

b. Feeling down, depressed, or hopeless?

- ☐ Not at all (0)
- ☐ Several days (1)
- ☐ More than half the days (2)
- ☐ Nearly every day (3)

If you get 3 or more when you add the answers to questions 23a and 23b the person may have a mental health need.

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[18] Kroenke, K., Spitzer, R. L., & Williams, J. B. (2003). The Patient Health Questionnaire-2: validity of a two-item depression screener. Medical Care, 41(11), 1284-1292.

24. Stress means a situation in which a person feels tense, restless, nervous, or anxious, or is unable to sleep at night because his or her mind is troubled all the time. Do you feel this kind of stress these days?[19]

- ☐ Not at all
- ☐ A little bit
- ☐ Somewhat
- ☐ Quite a bit
- ☐ Very much

Disabilities

25. Because of a physical, mental, or emotional condition, do you have serious difficulty concentrating, remembering, or making decisions?[20] (5 years old or older)

- ☐ Yes
- ☐ No

26. Because of a physical, mental, or emotional condition, do you have difficulty doing errands alone such as visiting a doctor's office or shopping?[21] (15 years old or older)

- ☐ Yes
- ☐ No

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[19] Elo, A.L., Leppänen, A., & Jahkola, A. (2003). Validity of a Single-Item Measure of Stress Symptoms. Scandinavian Journal of Work, 29(6), 444-451.

[20] United States, U.S. Department of Health and Human Services, Office of the Assistant Secretary for Planning and Evaluation (n.d.). (2011). Implementation Guidance on Data Collection Standards for Race, Ethnicity, Sex, Primary Language, and Disability Status. Retrieved from https://aspe.hhs.gov/basic-report/hhs-implementation-guidance-data-collection-standards-race-ethnicity-sex-primary-language-and-disability-status

[21] Ibid.

Appendix B

Curriculum Vita

MELISSA FLORES

Pronouns: She/Her/Hers
11976 SW 129th Place Portland, Oregon 97223
Phone: (503) 781-5465
mflores18@georgefox.edu

Education

PsyD Doctoral Candidate in Clinical Psychology Anticipated May 2023
Graduate School of Clinical Psychology (APA Accredited)
George Fox University Newberg, Oregon
Dissertation: "Retention Rates in Medication Assisted Opioid Treatment: The Effects of Social Determinants of Health"

MA Masters of Arts, Clinical Psychology May 2020
Graduate School of Clinical Psychology (APA Accredited)
George Fox University Newberg, Oregon

BS Bachelor of Science, Psychology June 2018
University of Oregon
Eugene, Oregon

Supervised Clinical Experience

Providence Sunset Medical Group-Behavioral Health Consultant Aug 2021-Present
Pre-internship, Cedar Hills, OR
Supervisor: Lauren Harper, PhD
Setting: Primary Care Clinic, Internal Medicine and Family Medicine

- Provided multifaceted services including short-term psychotherapy, assessments, comprehensive assessments, and professional consultation in an integrated medical setting
- Provided face to face intervention and HIPAA compliant tele behavioral health services and psychotherapy
- Conducted evidence-based therapy, including person-centered, ACT, and CBT

- Provided psychotherapy to treat a wide range of mental health and physical concerns; depression, anxiety, neurodevelopmental, trauma, psychosis, chronic pain, substance abuse/misuse, fibromyalgia, diabetes, and cognitive impairment etc.
- Coordinated care with treatment team; consult with primary care providers, medical staff, social workers, and collaboration with psychiatry
- Collaborated with patients to create individualized treatment plans with consideration for culture and lifestyle
- Skills training and targeted behavior change to facilitate autonomy, coping strategies, distress tolerance, stress reduction, and relaxation
- Provided psychoeducation for patients and their support systems
- Crisis consultation and risk assessment for harm to self, harm to others, abuse, and inability to care for self
- Identification and advocacy to medical staff about potential barriers that could impact patients health
- Position funded by HRSA; additional training, seminars, and didacts consistent with HRSA grant

Qualified Mental Health Professional (QMHP)- Crisis Consultant Feb 2021-Present
Practicum Experience and Professional Experience
Behavioral Health Crisis Consultation Team, Yamhill County, OR
Supervisors: Luann Foster, PsyD; Mary Peterson, PhD, ABPP; William Buhrow, PsyD

- Contracted with local county services to provide crisis consultation at emergency departments in local hospitals
- Perform risk assessments for suicide/homicide, psychosis, substance abuse, cognitive impairments, and other behavioral health evaluations
- Consultation with supervisor after every risk assessment
- Collaborative problem solving and treatment planning with medical staff to determine possible need for acute hospitalization, respite care, or outpatient services
- Attend weekly group supervision and didactics
- Collaborated with other team members and supervisors to improve assessments
- Trained and collaborated with scribe to provide concurrent charting during assessments
- Aided in training new crisis consultants providing shadowing opportunities and mentorship
- Conducted research using data from current team members to evaluate cultural competence working with diverse populations in the emergency department, and provided feedback for systems intervention based off of results

Providence Newberg Medical Group-Behavioral Health Consultant July 2020-Aug 2021
Practicum-II, Newberg, OR
Supervisor: Jeri Turgesen, PsyD
Setting: Primary Care Internal Medicine and Family Medicine

- Provided multifaceted services including short-term psychotherapy, assessments, comprehensive assessments, and professional consultation in an integrated medical setting

- Provided face to face intervention and HIPAA compliant tele behavioral health services and psychotherapy
- Provided psychotherapy to treat a wide range of mental health and physical concerns; mood disorders, anxiety disorders, trauma, psychosis, chronic pain, substance abuse/misuse, tinnitus, smoking cessation, risk assessment, cancer, fibromyalgia, diabetes, and cognitive impairment etc.
- Participated in chemical dependency rotation; substance use/abuse evaluation, identification of maladaptive coping strategies, co-visits with patients primary care physician and patient, attended didactics conducted by board certified psychiatrist specialized in addiction, and development of harm reduction strategies
- Coordinated care with medical treatment team; consult with primary care providers, medical staff, social workers, and collaboration with psychiatry
- Provided psychoeducation for patients and their support systems
- Motivational interviewing to develop behavioral strategies and collaborative treatment planning
- Identification and advocacy to medical staff about potential barriers that could impact patients health
- Crisis consultation and risk assessment for harm to self, harm to self, psychosis, and inability to care for self
- Skills training and targeted behavior change to facilitate autonomy, coping strategies, increase distress tolerance, stress reduction, and relaxation
- Position funded by HRSA; additional training, seminars, and didacts consistent with HRSA grant

Rural based Child and Adolescent Psychological Services- Therapist Sep 2019-June 2020
Practicum I, St. Paul, Oregon
Supervisor: Elizabeth Hamilton, PhD
Treatment Setting: Public school, Pre-K through 12th grade

- Provided multifaceted services to underserved populations, including individual/ group psychotherapy, and comprehensive assessments
- Conducted long-term and short-term evidence-based therapy, including play therapy, ACT, and relational psychodynamic
- Conducted system-based intake interviews with parents, staff, and students, to implement empirically-supported intervention strategies
- Crisis intervention through psychoeducational group meetings, individual risk assessments, and parent/student/staff consultation
- Administered a variety of behavioral, cognitive, and personality assessments as part of a multisystemic Individual Educational Plan team, providing screening support for learning disabled and at-risk students

Friendsview Retirement Community- Group Facilitator Feb 2019-May 2021
Pre-Practicum, Supplementary
Supervisor: Glena Andrews, PhD, MSCP, ABPP

- Provided group psychotherapy to geriatric population dealing with grief, transitions, and late life stages

- Group psychotherapy topics included Transitions and Stress Management
- Created a psychoeducational curriculum and protocol for groups such as Living in Isolation
- Collaborated with a co-facilitator to enhance group members experience
- Mentored and supervised new facilitators as they conducted group psychotherapy

Depression Support Group–Group Facilitator Oct 2018-Nov 2018
Pre-Practicum, Supplementary
Supervisor: Tami Rodgers M.D.; Glena Andrews, PhD, MSCP, ABPP

- Provided group psychotherapy and psychoeducation to adults experiencing depression and/or anxiety
- Reviewed psychoeducational videos and workbooks with group members
- Created a safe and respectful environment to facilitate discussion and utilized group psychotherapy skills to ensure people had a chance to share their insights
- Received peer to peer supervision on a weekly basis

Research Experience

Dissertation- Primary Researcher Jan 2019-Present
Dissertation**:** "Retention Rates in Medication Assisted Opioid Treatment: The Effects of Social Determinants of Health"
Chair: Celeste Jones, PsyD, ABPP
Committee: Jeri Turgesen, PsyD, ABPP; Kristie Knows His Gun, PsyD

- Preliminary defense: 5/4/2021
- Final Defense: TBD (Expected to be completed before internship)
- This study intends to contribute to the literature on medication for opioid use disorder for opioid use. The purpose of this study is to analyze the effects of the Social Determinants of Health on retention rates in medication for opioid use disorder, specifically examining biopsychosocial components.
- Plans to submit article to the journal of *Substance Use and Misuse*

Research Vertical Team- Research Assistant/Mentor Jan 2019-Present
George Fox University, Newberg, Oregon
Supervisor: Celeste Jones, PsyD, ABPP

- Bi-monthly small group meetings for developing research competencies
- Research preparation for dissertation, conference presentations, and research topics
- Collaborated on supplemental research projects such as posters and symposiums
- Presented posters at the American Psychological Association and Oregon Psychological Association
- Presented symposium at the Christian Association for Psychological Studies
- Aided and mentored other students seeking research opportunities

Observational Behavioral Coder – Research Assistant Sep 2017-June 2018
The Prevention Science Institute, University of Oregon

Supervisor: AnnaCecilia McWhirter, M.Ed.

- Conducted observational behavioral coding of video interactions with parents and their children participating in the Kindergarten Study (IES; PI Dr. Beth Stormshak).
- Reliably coded using the Relationship Affect Coding System (RACS) on the Observer XT (Noldus) program, and the Coder Impressions Questionnaire (COIMP) focusing on family interactions and dynamics.
- Over 270 hours of experience with observational behavioral coding. Attended weekly supervision meetings to ensure coding reliability as a team and across time.
- Assisted in the training of incoming coders to retain reliability on coding assignments

Posters and Presentations

Beard, J., Price, L., **Flores, M.,** & Bufford, R. (2020). T*he Relationship between Self-Compassion and Personality Traits.* Poster session presented at the American Psychological Association, Washington, DC.

Bufford, R., Beard, J., **Flores, M.,** Price, L., & Hodge, A. (2021). *Dimensions of Grace Scale: Concurrent Validation* [Symposium]. Christian Association for Psychological Studies 2021 Virtual Convention, United States.

Flores, M., Bigon, J., Price, L., Wu, N., Knows His Gun, K., & Gathercoal, K., (2021). *Competence Working with Diverse Populations Conducting Risk Assessments in the Emergency Department*. Poster session presented at the Oregon Psychological Association 2021 Virtual Conference.

Note: Winner of the Education & Systems Competency Award

Price, L., **Flores, M.,** Beard, J., & Bufford, R. (2021). *The Relationship between Self-Compassion and Grace*. Poster session presented at the American Psychological Association 2021 Virtual Conference.

Recinos, E., Hamilton, E., Richmond, A.-M., Bigon, J., **Flores, M.,** & VanAsselt, A. (2020). *Comparison of Adaptive Functioning Measures in Rural Youth.* Poster session presented at the American Psychological Association, Washington, DC.

Young, D., **Flores, M**., Tissell, P., Hamilton, E., & Gathercoal, K (2020). *Culturally Relevant Intelligence Assessment in Rural, Latinx Youth.* Poster session presented at the American Psychological Association, Washington, DC.

Young, D., Hamilton, E., **Flores, M.,** Van Asselt, A. & Wingerter, R., (2021). *Analysis of BASC-3 Profiles for Trauma Exposed, Rural Youth Compared to Unexposed Peers.* Poster session presented at the American Psychological Association 2021 Virtual Conference.

Young, D., Hamilton, E., Van Asselt, A., & **Flores, M.** (2021). *Cognitive Profiles on the WJ-IV for Youth with Specific Learning Disorders or Trauma Exposure.* Poster session presented at the American Psychological Association Virtual Conference.

Supervision Experience

George Fox University Aug 2021-Present
Supervisor and Teaching Assistant: Clinical Foundations
Graduate School of Clinical Psychology
Professor: Aundrea Paxton, PsyD

- Responsible for monitoring/supervising student competencies for evidence-based therapy skills for first-year doctoral students in the George Fox Graduate School for Clinical Psychology
- Facilitated and encouraged critical thinking about potential bias that could impact clinical work
- Provided weekly supervision with students, reviewing clinical work and progress notes
- Reviewed students clinical work in the form of videos and providing synchronous and a synchronous feedback
- Held individual meetings to provide feedback to students about strengths and growing edges
- Participated in student panel to discuss diversity, equity, and inclusion in psychology

Teaching Experience

George Fox University- Theories of Personality Aug 2019-Present
Guest Lecturer and Teaching Assistant
Graduate School of Clinical Psychology
Professor: Winston Seegobin, PsyD

- Responsible for holding weekly case conceptualizations for various theories including CBT, ACT, Psychodynamic, Feminist, Existential, Behavior, Solution Focused, and Person-Centered
- Encouraged and facilitated individualized case conceptualizations based on chosen theory
- Graded and provided feedback across a variety of competency-based domains
- Guest Lectured on Focused Acceptance and Commitment Therapy and Feminist Therapy

George Fox University- Multicultural Psychotherapy Jan 2021-May 2021
Teaching Assistant
Graduate School of Clinical Psychology
Professor: Winston Seegobin, PsyD

- Responsible for monitoring student competency for multicultural awareness
- Facilitated and encouraged critical thinking about potential bias that could impact clinical work
- Encouraged difficult conversations around intersectionality, assimilation, and complex identity development
- Guest lectured for clinical considerations for working with Asian Americans

George Fox University- Integrative Approaches to Psychology Aug 2019-May 2021

Teaching Assistant
Graduate School of Clinical Psychology
Professor: Mark McMinn, PhD, ABPP; Dr. Mike Vogel, PsyD

- Participated in teaching team conversations, drawing on identity development, personal experience, and clinical experience
- Facilitated small group discussions surrounding difficult topics; racism, sexism, trauma, religious trauma, forgiveness, post modernism, and modernism etc
- Responsible for checking in with students and monitoring for concerns
- Collaborated with professors for course content and course structure

George Fox University- Non-Violent Communication Oct 2019-Jan 2021
Provided Didactic and Guest Lecture
Graduate School of Clinical Psychology

- Engaged in virtual training on non-violent communication
- Presented on the concept and theory of non-violent communication as a tool to engage in difficult dialogue
- Recurrent consultation and presentations on how to implement non-violent communication
- Facilitated exercises to practice non-violent communication
- Facilitated conversations on challenging topics like experience of racism, politics, religion, and physician assisted suicide
- Exploration of unconscious bias and judgments

George Fox University- Cognitive Assessment Aug 2020-Dec 2020
Teaching Assistant
Graduate School of Clinical Psychology
Professor: Kenneth Logan, PsyD

- Aided in the organization and structuring of the course
- Aided in the teaching, mentoring, and practice of individualized assessment of intellectual and other selected cognitive functions (i.e. WAIS-IV and WMS-IV)
- Facilitated weekly lab group meetings with students for administration practice and continued support in course
- Attend weekly meetings with course professor and other teaching assistants to address student concerns and course components
- Participate in meetings with other teaching assistants to address grading criteria and promote inter-rater reliability for APA competency in test administration, test scoring, and test interpretation

Related Experience

Student Body Council- Cohort Representative Aug 2020-Present
Office Held: Student Body President (2021-Present)
Previous Office Held: Student Wellness Coordinator (2020-2021)
George Fox University, Newberg Oregon

- Voted into student body council by peers as cohort representative
- Created and recruited members for the student wellness committee
- Advocated for student wellbeing and health to faculty and program administrators
- Advocated, discussed, and made critical decisions about distribution of funds for students in emergency need and funding research projects
- Helped facilitate town halls between students and faculty to promote communication, transparency, and equity within the program
- Program consultation and system improvement
- Collaborated with program director for selection of students for admissions committee with consideration for diversity and equity

Primary Care Track/HRSA Recipient April 2019-Present
George Fox University, Newberg, Oregon
Supervisor: Kristie Knows His Gun, PsyD

- Specific training to increase depth and breadth in a primary care setting
- Training to treat and assess patients from 3 to 103, presenting with conditions from adjustment disorders to complex medical conditions
- Professional development and training to work on a multidisciplinary team and/or integrated care setting
- HRSA grant was awarded George Fox University to expand services to underserved, vulnerable populations through simultaneous training for graduate psychology students in treatment for OUD/SUD and establishment of tele behavioral health services (TBS)
- Completed various trainings according to requirements of the HRSA grant
- Didactic training with Dr. **Strohsal** on practical application of Focused Acceptance and Commitment Therapy in primary care, and follow up meeting with case conceptualization

Admissions Committee- Student Representative Oct 2019-May 2020
George Fox University, Newberg, Oregon

- Responsible for collaborating with faculty for graduate student admissions into the PsyD program
- Reviewed and discussed potential strengths and weaknesses of applicants
- Advocated for diversity, equity, and inclusion during admissions process
- Hosted potential applicants as they shadow classes
- Participated in interview day as a student evaluator and acted as student representative for the program on the student panel

Health Psychology Student Interest Group - Coordinator/Leader Aug 2019-May 2021
George Fox University, Newberg, Oregon

- Responsible for planning events on topics related to health psychology and reaching out to potential guest lectures
- Responsible for introducing new graduate students to various roles and opportunities related to integrated care
- Spoke on a student panel about practicum and supplementary opportunities in integrated care

- Coordinated didactics and seminars to enhance knowledge and dive deeper into health psychology topics
- Collaborated with peers and student body for possible suggestions for future events

Clinical Team- Member Aug 2018-Present
George Fox University, Newberg, Oregon
Consultants: Kristie Knows His Gun, PsyD; Amber Nelson, PsyD; Bill Buhrow, PsyD

- Consultation group that meets weekly to present and discuss cases from various clinical perspectives.
- Conceptualized clients through a biological, psychological, and social.
- A team model that utilized interprofessional communication to process bias, countertransference, and explore treatment options
- Experienced summative feedback from clinical team supervisors strengths and weaknesses

Inside Out Prison Education Program – Student Participant Sep 2017-Dec 2017
University of Oregon
Eugene, Oregon

- Using the Inside-Out Prison Exchange Program model, this course included both "inside" (students inside OSP) and "outside" students (students at UO)
- Classes took place in the maximum-security Oregon State Penitentiary, located in Salem
- Through course dialogues and activities, we explored the needs and roles of victims, offenders, communities, and justice systems, as well as outlined the principles and values of Restorative Justice.
- Through a critical lens we scrutinized assumptions and labels given to victims and offenders

Trainings

Telehealth Training for Behavioral Health Providers May 2021
HRSA Training
Jeff Sordahl PsyD

Scaffolded Training in Culturally Specific Trauma-Informed Care May 2021
HRSA Training
Gil-Kashiwabara PsyD; Knows His Gun PsyD

OUD/MOUD Clinical Work & Tools May 2021
HRSA Training
Brett Kaylor, DO

Native Culture and Individuals May 2021
HRSA Training
Knows His Gun PsyD & Pilar Peltier

Interprofessional Solutions for Racism in Primary Care: Diversity & Equity Feb 2021
Amber Nelson PsyD; Kristie Knows His Gun PsyD

Removing Barriers to Integrated Behavioral Health in Primary Care: Research, Practices & Implementation March 2021
Patti Robinson PhD; Bhavesh Rajani MD
Complex PTSD and Military Psychology Nov 2020
Jason Steward PhD
Pediatric Cancer and Epilepsy Oct 2020
Justin Lee PhD
Interprofessional Solutions for Chronic Conditions in Primary Care Nov 2020
Bhavesh Rajani MD, MBA; Kevin Sellars MD
Behavioral Health Clinician Essentials: BHC & FACT Training Aug 2020
Patti Robinson PhD; Julie Oyemaja PsyD
FACT Training & Skills Workshop Aug 2020
Patti Robinson PhD; Kirk Strohsal PhD
Interprofessional Solutions for High-Impact Chronic Pain July 2020
Bhavesh Rajani MD
Interprofessional Solutions for Treating Depression in Primary Care Jan 2020
Bruce Arroll MBChB, PhD, FRNZCGP
FACT: The Basics and Beyond Dec 2019
Kirk Strosahl PhD
Intercultural Empathy & Cultural Intelligence Oct 2019
Cheryl Forster PsyD
Non-Violent Communication Aug 2019
Marshall Rosenberg PhD
Foundations of Relationships Therapy- The Gottman Model March 2019
Douglas Marlow PhD
Suicide Assessment and Treatment Feb 2019
Luann Foster PsyD
Domestic Violence: A Science Based Approach Feb 2019
Patricia Warford PsyD
Opportunities in Forensic Psychology Feb 2019
Diomaris Safi PsyD; Alex Millkey PsyD
Working with Clients with Chronic Pain March 2019
Scott Pengally PhD

Certifications

Trauma Treatment Certificate- George Fox University Jan 2021-Present
Trauma Work in Clinical Practice & Trauma Work Consultation Group
Professor: Kenneth Logan, PsyD

- Formal training and course work on trauma-informed treatment processes, including polyvagal theory and complex PTSD related diagnoses
- Direct training and practice with advanced trauma treatment skills, including: stress-response model, primary nervous system functioning, personality considerations for treatment, and process response evaluation of patients

- Case conceptualization work with complex trauma patients, to consider essential treatment aspects, such as: client activation, avoidance responses, emotional dysregulation, and relational disturbance
- At least twenty hours of supervised clinical practice at a program approved practicum site treating clients for conditions caused by exposure to traumatic stress

Basic Life Support Provider- American Heart Association Oct 2018-Present

- Successfully completed the cognitive and skills evaluations in accordance with the curriculum of the American Heart Association Basic Life Support (CPR and AED) Program.

Affiliations

Psychology Students for Inclusion, Diversity and Equity (PSIDE) Jan 2021-Present
Graduate Student Affiliate
American Psychology Association Aug 2018-Present
Graduate Student Affiliate
Division 38, American Psychology Aug 2019-Present
Society for health psychology
Mortar Board Senior Honor Society Sep 2017-June 2019
Office Held: Alumni Relations Chair

Honors and Awards

Education & Systems Competency Award-Poster Presentation June 2021
Awarded by Oregon Psychological Association
Supervisor: Kristie Knows His Gun

- **Flores, M.,** Bigon, J., Price, L., Wu, N., Knows His Gun, K., & Gathercoal, K., (2021). *Competence Working with Diverse Populations Conducting Risk Assessments in the Emergency Department*. Poster session presented at the Oregon Psychological Association 2021 Virtual Conference.
- Program evaluation research to evaluate the quality of risk assessment work conducted with diverse patients in rural emergency departments
- Provided system intervention and feedback based off of results to reduce disparities and inequities

HRSA Grant Recipient Aug 2020-Present
Awarded by George Fox University

Integrated Care Models for Practicum Training in Addictions and Culturally congruent treatment using Tele-Behavioral Health (IMPACT) through George Fox University

- Granting Agency: Health Resources and Services Administration
- This project seeks to expand services to underserved, vulnerable populations through simultaneous training for graduate psychology students in treatment for OUD/SUD and establishment of tele behavioral health services (TBS)

- Received living and research stipend

Diversity Scholarship Recipient Aug 2018-Present
Awarded by George Fox University

- Committed to working with diverse populations while acknowledging the life long journey of cultural humility
- Committed to helping vulnerable and marginalized communities
- Exploration of the health inequities and how that can impact health trajectory