


4-2021

C.H.A.N.G.E.: Strengthening Resiliency in Pregnancy

Joanna L. Harbets

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C.H.A.N.G.E.: Strengthening Resiliency in Pregnancy

Joanna L. Harberts

Presented to the Faculty of the
Graduate School of Clinical Psychology
George Fox University
in partial fulfillment
of the requirements for the degree of
Doctor of Psychology
in Clinical Psychology

Newberg, Oregon

April 2, 2021

C.H.A.N.G.E.: Strengthening Resiliency in Pregnancy

by

Joanna L. Harberts

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Graduate School of Clinical Psychology

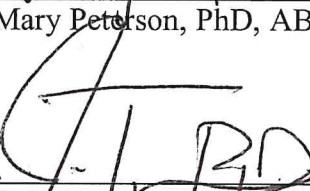
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Signatures:



Mary Peterson, PhD, ABPP/CL, Chair



Jeri Torgesen, PsyD, ABPP, MSCP



Ryan Dix, PsyD, MS, NCTTP

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Joanna L. Harberts

Graduate School of Clinical Psychology

George Fox University

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Abstract

Pregnancy and childbirth is a biologically, socially, and psychologically complex period in a woman's life (Anda, 2010). Carrying an infant in the womb is made even more difficult if a mother has endured her own trauma, potentially transmitting a vulnerability to her child's development through maternal behavior and emotions (Hudziak, 2018). Additionally, the transition to parenthood is a general life stressor which often activates her attachment system. Symptoms of depression, anxiety, and trauma may also interfere with her ability to bond with her child (Main, 2000). Although the complexity of pregnancy and motherhood can be daunting, a mother's resilience may mitigate the impact of these risk factors and support her health and wellbeing. Psychologists define resilience as the process of adapting well in the face of adversity, trauma, tragedy, threats, or significant sources of stress (APA, 2012). Few studies have focused on the impact of resilience to stress on the mental and physical health of pregnant women (Ma et al., 2019). This study seeks to describe the risk of adverse birth outcomes associated with prenatal trauma and insecure attachment, as well as the potential to positively impact resilience through the incorporation of a resiliency based intervention early in pregnancy. The intervention

targeted the risk of developing mood symptoms, identified positive coping strategies and highlighted meaningful resources for women to access during the prenatal period to help support pregnancy health and wellbeing.

Keywords: Pregnancy, Adverse Childhood Experiences, Attachment, Resiliency

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Chapter 1

Introduction

Adverse childhood experiences (ACEs) include physical, sexual, or emotional abuse, neglect, parental loss, and family dysfunction such as mental illness, substance abuse, or witnessing domestic violence. Research has found that 60% of adults have experienced one or more ACEs (Flanagan et al., 2018). ACEs are robust predictors of long-term psychological and physical health consequences (Racine et al., 2018). During pregnancy, ACEs predict a variety of difficulties, including mental health problems, discomfort and health complaints, excessive weight gain, obstetric problems, and more frequent contacts with the healthcare system (Smith et al., 2016). Further, during the early postpartum period, ACEs are associated with difficulties breastfeeding and adverse infant outcomes, including insecure attachment and poor socioemotional functioning (Flanagan et al., 2018). As wonderful as the prospect of bringing a new life into the world may be, it comes with its own unique set of challenges when viewed through a trauma-informed lens. The literature below aims to provide a better understanding of this interaction through a detailed examination of the association between ACEs and prenatal maternal attachment style, and the mediator of resiliency.

Adverse Childhood Experiences

An extensive body of research on ACEs suggests ACEs are a chronic public disaster (Anda, 2010). ACEs have consistently been associated with a range of negative psychological and physical outcomes in adulthood. It has been shown to explain 50–78% of the variance in

population risk for adult depression, substance abuse, and suicide attempts (Anda, 2006).

Additionally, ACEs have been associated with unfavorable health outcomes such as chronic obstructive pulmonary disorder, ischemic heart disease, tumor growth, anxiety, post-traumatic stress disorder (PTSD), risky health behaviors including illicit drug abuse, alcohol abuse and early initiation of sexual activity, and neurodevelopmental deficits (Smith et al., 2016). Research also demonstrates that individuals with significant ACEs have shown to have a higher risk of violence or re-victimization and premature mortality (Anda, 2010). Studies have shown that ACEs are associated with later problems in social, emotional and cognitive domains, including compromised mental health, difficult romantic relationships, and insecure attachment styles, all of which may be related to aberrant parenting behavior and stress in the parenting role (Moe et al., 2018).

ACES and Pregnancy

The developmental cascade from maternal ACEs to child development outcomes appears to begin prenatally, revealing the need for early intervention and support for women with exposure to early adversity before and during pregnancy (Racine et al., 2018). Specifically, mothers who experienced more adversity in childhood, experienced more health risks in pregnancy and, in turn, had infants who were born with more infant health risks (Monk et al., 2008). Maternal early adversity has downstream consequences that perpetuate risks for the next generation. Research suggests that children of mothers who have been exposed to ACEs are at increased risk of a multitude of poor health outcomes, including delayed achievement of developmental milestones and increased likelihood of parent-child relationship difficulties in infancy (Racine et al., 2018). Understanding the antecedents and mechanisms that lead to the

intergenerational transmission of risks can facilitate the development of preventive interventions that aim to break continuities of risk across generations (Racine et al., 2018).

Often stemming from ACEs, perinatal anxiety and depression are a major public health problem which leads to negative health outcomes for both mothers and children (Muzik & Borovska, 2010). Prenatal depression is a particularly hazardous condition because it is a silent form of depression that impacts women and their developing fetuses (Brown & Solchany, 2004). Depression is often difficult to recognize against the backdrop of pregnancy, and there is a tendency to blame emotional changes on pregnancy hormones (Biaggi et al., 2016). Practitioners must be aware of this phenomenon and take it seriously. Prenatal depression and anxiety can have far-reaching effects if left untreated, impacting the pregnant woman and following the child throughout life in various detrimental ways (Muzik & Borovska, 2010).

Attachment and Pregnancy

Attachment theory highlights the importance of the quality of the relationship between an infant and their primary caregiver (Main & Solomon, 1990). Bowlby (1988) suggested that attachment patterns reflect working models of the self and the other, representing both sides of the relationship. Such working models are formed already in the first years of life, based on actual interactions with the child's primary caregivers. An infant who receives sensitive and responsive care from the caregiver is prone to form internal working models of the self as a person worthy of love and care, and of the attachment figure as someone who can be relied on when the attachment system is activated and emotional needs arise (Moe et al., 2018). Caregivers with unresolved trauma or loss may behave in frightening ways and foster a disorganized attachment style with their infant (Main, 2000).

Maternal mental health significantly influences maternal-fetal attachment, and infant-caregiver bonding begins fairly early in pregnancy (Satyanarayana et al., 2011). Researchers found that as the number of ACEs increased, so did the probability of insecure or unresolved adult attachment classifications (Murphy et al., 2014). Thus, ACEs may lead to insecure internal working models of relationships to significant others, which render a mother more susceptible to developing a more avoidant or a more anxious attachment style (Mikulincer & Shaver, 2012).

Responsive and contingent parenting produces securely attached children who show more curiosity, self-reliance, and independence (Hong & Park, 2012). Securely attached children also tend to become more resilient and competent adults (Hong & Park, 2012). On the other hand, insecure attachment styles may in turn have a negative impact on parenting behavior and parenting stress, as they may result in a non-optimal relationship with the father of the child, which again may prevent optimal interaction between parents when bringing up their child (Jones et al., 2015). Moreover, mothers' insecure internal working models may also impede the developing of an optimal mother-child relationship, and such mechanisms may in turn increase parenting stress (Jones et al., 2015). The type of caregiving an infant receives is central to a preverbal set of expectations regarding human interaction. (Brandon et al., 2009). Together, the three risk factors of ACEs, physical and emotional demands during pregnancy and impaired attachment may interact and negatively affect birth outcomes.

Adverse Birth Outcomes

Mounting empirical evidence suggests that maternal emotional distress during pregnancy, including anxiety and depressive symptoms, may increase the risk of adverse birth outcomes, such as preterm birth or shorter length of gestation, intrauterine growth restriction, and low or lower birth weight at delivery (Pesonen et al., 2016). Low birth weight is the leading cause of

infant and child mortality and contributes to several poor health outcomes (Kim & Saada, 2013), making screening pregnant women for trauma history and mood symptoms an important part of the intake process (Blackmore et al., 2016). Furthermore, birth weight is an important indicator of the child's vulnerability to the risk of childhood illnesses which may predict the child's future health and development (Hailu & Kebede, 2018).

Trauma exposed women are more likely to engage in poor prenatal health behaviors such as smoking, drinking, and illicit drug use that could explain shorter gestation or preterm birth (Blackmore et al., 2016). The possibility that trauma history may compound other risks for poor obstetric outcomes was recently suggested by Yonkers & colleagues (2014) who found a 4-fold risk of preterm birth in women with both posttraumatic stress disorder and depression. One study demonstrated that male infants born to mothers with a history of trauma and higher third trimester cortisol levels had significantly lower birth weights (Flom et al., 2018). Infants born preterm are at a greater risk of various health and developmental problems, and present a considerable emotional and economic cost to families, as well as significant implications for public-sector services (Steneva, Bogossian Pritchard & Wittkowski, 2015).

Resiliency

The above research highlights the risk of adverse birth outcomes when a new mom has a history of ACES and an insecure attachment history. Identifying and addressing these risk factors could lead to improved perinatal outcomes that have lifelong implications for health of mother and baby (Flom, 2018). Hence, it is vital to study potential protective factors that might mitigate the negative effects of stress and trauma, such as resiliency. Resiliency describes the empirically observable phenomenon under which an individual does not or only temporarily, experiences mental health problems despite being subjected to psychological or physical stressors of short or

long duration (Helmreich et al., 2017). By definition, resiliency always presupposes the exposure to substantial risk or adversity (Helmreich et al., 2017).

Psychosocial resiliency factors that are well-evidenced according to the current state of knowledge and are thought to be modifiable include meaning or purpose in life, sense of coherence, positive emotions, hardiness, self-esteem, active coping, self-efficacy, optimism, social support, cognitive flexibility, and religiosity or spirituality or religious coping. This resilient process is characterized by either a trajectory of undisturbed mental health during or after adversities or temporary dysfunctions followed by successful recovery (Helmreich et al., 2017). In general, resilience is viewed as the outcome of an interaction between the individual and his or her environment which may be influenced through personal as well as environmental resources (Helmreich et al., 2017). As such, resilience is modifiable and can be improved by interventions (Helmreich et al., 2017). Learning some coping strategies about mood and mind has helped pregnant women and new mothers to build resilience to stay well (Steen, 2015).

Developing skills and coping strategies to be resilient during pregnancy and when becoming a mother are essential for maintaining maternal mental health (Steen, 2015). If poor maternal mental health is not recognized, and the necessary care and support is not received, then long-term adverse effects have been reported with regards to a child's and adolescent's emotional, behavioral, cognitive and social skills (Halligan, 2007). Therefore, the prevention of mental health problems and supporting pregnant women and new mothers who are particularly at risk, to build resilience and stay well is vitally important (Steen, 2015). Resiliency is far more than individual strengths or our ability to pick ourselves up after a bad experience. Our individual resilience depends on the quality of the systems that surround us and how well they give us what we need. A resilient pregnancy, birth, and post-natal environment ensures mom and

child have the resources needed to survive the stress of this monumental life transition.

The purpose of this study was to provide a psychoeducation resiliency training to build skills to cope with the risk factors inherent in pregnancy.

Hypotheses

H1: There would be a positive correlation between the number of ACES reported by the mother and the type of attachment style reported.

H2: A short evidenced-based resiliency intervention would increase engagement in prenatal care as measured by attending the recommended sequence of prenatal appointments.

H3: Women with higher ACES scores who also participate in the intervention would begin care with the behavioral health clinician at a higher rate than women with lower ACES scores or women who haven't participated in the intervention.

H4: Women participating in the intervention would demonstrate increased knowledge in content knowledge and skills related to resiliency.

Chapter 2

Methods

Participants

Participants included patients from Women's Healthcare Associates, LLC, located in Newberg, Oregon. The participants were expectant mothers in their first trimester enrolled in the "New Mom's" class. Participation in the 90-minute class was encouraged but not required.

Measures

Participants completed the informed consent (Appendix A). Following consent, the participants completed the following measures before the class:

Adverse Childhood Experience Questionnaire (ACE)

The ACE Questionnaire is a 10-item survey that assesses for childhood trauma (see Appendix A). The CDC-Kaiser Permanente Adverse Childhood Experiences (ACEs) Study is one of the largest investigations of childhood abuse and neglect, as well as household challenges. The original ACEs Study was conducted at Kaiser Permanente from 1995 to 1997 with two waves of data collection. The ACE Study uncovered the strong relationship between adverse childhood experiences and risk factors for disease and well-being throughout the life course. An individual's ACE score is the total sum of the different categories of ACEs reported by participants. The ten-item measure is considered to have adequate with a Cronbach's alpha of .70 (Folayan et al., 2020).

Revised Adult Attachment Scale (RAAS)

The RAAS was officially developed in 1990 and was built on the earlier work of Hazen & Shaver (1987) and Levy & Davis (1988). The *Revised Adult Attachment* version of the scale was revised in 1996 with the instructions and items referring to *close* relationships rather than *romantic* relationships. The scale was developed by decomposing the original three type prototypical descriptions (Hazen & Shaver, 1987) into a series of 18 items. The 18 items are scored on a 5-point Likert scale. It measures adult attachment styles named *Secure*, *Anxious*, and *Avoidant*. Secure, anxious, and avoidant are defined as: Secure = high scores on Close and Depend subscales, low score on Anxiety subscale; Anxious = high score on Anxiety subscale, moderate scores on Close and Depend subscales; Avoidant = low scores on Close, Depend, and Anxiety subscales. The internal consistency of the scale is adequate with Cronbach's alpha for the two-dimensional closeness and dependency ($\alpha = .73$) and the anxious attachment dimension ($\alpha = .73$) (O'Connor & Elklit, 2008).

“New OB: Women's Health History”

The *New Women's Health History* is the Women's Healthcare Associates' standardized intake questionnaire, which includes the Edinburg Depression Scale (EDS), a widely used screening tool for depressive symptomatology. The EDS has been validated, both as a prenatal and postpartum screen for minor or major depression. The EDS is easy to administer and effective in its function, with high sensitivity and specificity (Bowen & Muhajarine, 2006). Furthermore, the EDS measures symptoms of anxiety, and serves as a proxy for both depression and anxiety (Matthey et al., 2013).

Additionally, the health history in the “*New OB: Women's Health History*” contains information related to the patient's drug, tobacco, alcohol, and prescription drug use, as well as

family/social, gynecological, sexual, and medical histories. Participants were asked to complete this form upon enrollment in the “New Mom’s Class”, and the information gathered is reported in the results.

The C.H.A.N.G.E. Intervention

The C.H.A.N.G.E. intervention highlights the following concepts: **C**hallenge, **H**ealth, **A**ction, **N**otice, **G**ratITUDE, and **E**ngagement. Consisting of six, evidence-driven sections, *C.H.A.N.G.E.* works to challenge cognitive thinking errors, support positive health behaviors, increase behavioral activation, practice mindfulness, support gratitude and enhance engagement through connection to meaningful supports and resources. *C.H.A.N.G.E.*, pre-post assessment is a 7-item pre/post screen, created for this study, that is based on resiliency, personal history, and best practices in early intervention was given to participants to determine the impact of the *C.H.A.N.G.E.* intervention.

Subjects

The participants for this study were selected via the standard referral process for the New Mom’s class at Women’s Healthcare Associates, LLC. A quasi-experimental design due to the inability to use random assignment, the C.H.A.N.G.E. intervention was the independent variable, and the dependent measures included both short and long-term outcome measures. Literature has shown that ACEs and attachment style influence functioning during stressful periods. As such, these variables were assessed for use as potential covariates.

Intervention

The C.H.A.N.G.E. intervention (See Appendix B) was developed for this study and is based on evidence-based practices for resiliency development. Each section includes psycho-

education and tools for the patients to utilize during and after pregnancy in order to strengthen their level of resiliency.

During class, the C.H.A.N.G.E. resiliency intervention was cofacilitated by the researcher and clinic registered nurse. As part of the intervention, participants developed a brief self-care “*My C.H.A.N.G.E. Plan*” (see Appendix B). Following the intervention, participants completed the post-screen to assess the effectiveness of the intervention. Additionally, patients’ enrollment in behavioral health services and adherence to medical appointments, were tracked through electronic medical record through the remainder of their pregnancy.

Pandemic Adjustments

The original research design included 40 participants as the intervention was incorporated into an ongoing New Mom’s class. In February 2020, the 1st and 2nd group received the C.H.A.N.G.E. intervention and pre/post scale. The COVID 19 pandemic forced the discontinuation of the class with only 10 participants completing the course. Given the need to triage patient care during the pandemic, there was not sufficient staff or resources to adjust the format or workflow to continue the course through a telehealth format. To create a proxy for the control group, we identified a demographically matched sample of ten women to serve as a comparison group on the following variables: difference in number of prenatal appointments, missed appointments, and use of behavioral health services.

Chapter 3

Results

Descriptive Statistics

Demographic information was collected for the 20 participants (10 in the intervention group and 10 in the matched sample group.) A total of 18 women identified as white and two as Hispanic, the women had an average age of 28.4 years ($SD = 4.29$) and an average of 1.5 pregnancies. The women in the intervention group reported an average number of ACEs as 1.7 ($SD = 2.41$) and the average number of ACES for the women in the matched sample was unknown. Results for the Revised Adult Attachment Scale (RAAS) found that five women identified as having a secure attachment style (50%), four with a dependent attachment style (40%) and one with an anxious attachment style (10). The pre and post-test means and standard deviations for the C.H.A.N.G.E. assessment are shown in Table 1.

Data Analysis

Hypothesis 1 predicted there would be a positive correlation between the number of ACES reported by the mother and the type of attachment style reported. Contrary to this hypothesis, the potential covariates of the number of Adverse Childhood Experiences (ACES) and the Adult Attachment Scale (AAS) failed to have a significant correlation with any of the dependent variables and were not used in additional analyses. The descriptive statistics of the Adult Attachment Scale showed that 5 participants were classified as securely attached and five were classified as insecurely attached. The restricted range of the results (50% scored as secure attachment) likely influenced the lack of correlation.

Table 1*Pre-Post Scores on C.H.A.N.G.E. Assessment*

Intervention Group	Pre		Post	
	Mean	<i>SD</i>	Mean	<i>SD</i>
1	4.4	.52	4.9	.32
2	4.0	.47	4.9	.31
3	4.0	.67	5.0	.00
4	3.8	.63	5.0	.00
5	4.1	.73	5.0	.00
6	4.1	.31	5.0	.00
7	3.8	.42	5.0	.00

The results of the ACES indicated an average of 1.7 reported ACEs per person ($SD = 2.4$). Similar to the AAS, the ACES scores failed to significantly correlate with any of the dependent variables, therefore it was not used as a covariate.

Hypothesis 2 predicted a short evidenced-based resiliency intervention would lead to increased engagement in prenatal care as measured by adherence with the recommended sequence of prenatal appointments. Although the pandemic precluded the use of a control group, the data from a matched sample of women who did not participate in a new Mom's group supported this hypothesis with women in the intervention group attending more visits than women in the match sample. Furthermore, women in the intervention group had missed fewer appointments than in the matched group, however it failed to reach statistical significance (see Tables 2 and 3).

Table 2*Appointment Adherence*

	Group Statistics		
	Per Group (<i>n</i> = 10)	Mean	<i>SD</i>
Number of Appointments	Intervention	13.10	3.24
	Matched	12.90	1.595
Number of Missed Appointments	Intervention	.20	.422
	Matched	.50	.707

Table 3*Independent Samples Test*

		Levene's Test for Equality of Variances						
		F	Sig	t	df	Sig (2-tailed)	Mean Difference	<i>Cohen's d</i>
T1 Appts	Equal variances assumed	15.28	0.001*	3.14	18	0.006*	1.6	1.14
	Equal variances not assumed			3.14	11.5	0.009*	1.6	
T1 n/s	Equal variances assumed	4.78	0.042	-1.15	18	0.264	-0.3	0.58
	Equal variances not assumed			-1.15	14.68	0.268	-0.3	

Note. * Indicates statistical significance.

Hypothesis 3 predicted that women with higher ACES scores who participated in the intervention would begin care with the behavioral health clinician at a higher rate than women with lower ACES scores or women who have not participated in the intervention. As reported above the restricted range of the ACES failed to show a correlation that could be used to test this hypothesis. However, results showed that 30% of the women in the intervention group sought behavioral health services compared to no women in the matched group.

Hypothesis 4 stated participants receiving the resilience training would show improvement in knowledge and skills regarding coping skills. The results of the paired sample t-tests showed there was a significant difference between Time 1 and Time 2 for six of the seven items the C.H.A.N.G.E. assessment measure. Thus, the results of the analysis supported Hypothesis 4 (see Table 4).

Table 4

Paired Sample T-Test: CHANGE Pre-Post

Pairs	Paired Differences				
	Mean	SD	T(9)	P	Cohen's D
Q1-Q1 Post	-5.0	.53	-3.00	.015	.53
Q2-Q2 Post	-.90	.57	-5.01	.001*	.57
Q3-Q3 Post	-1.0	.67	-4.74	.001*	.67
Q4-Q4 Post	-1.2	.63	-6.00	.000*	.63
Q5-Q5 Post	-.909	.74	-3.86	.000*	.74
Q6-Q6 Post	-.90	.32	-9.00	.000*	.32
Q7-Q7 Post	-1.2	.42	-9.00	.000*	.42

Note. * Indicates statistical significance.

Chapter 4

Discussion

The purpose of this study was to investigate the effectiveness of a resiliency-based intervention early in pregnancy, targeting the risk of developing mood symptoms, identifying positive coping strategies, and increasing awareness of meaningful resources women can access during the prenatal period to help support pregnancy health and wellbeing.

As reported in the results, Hypothesis 1, suggesting a positive correlation between the number of ACEs reported by the mother and the type of attachment style reported was not supported. In contrast, Hypotheses 2 predicting a short evidenced-based resiliency intervention will increase engagement in prenatal care as measured by compliance with prenatal appointments was partially supported, as women who participated in the intervention had more appointments than the matched sample. Hypothesis 3 was also partially supported as women who participated in the intervention were more likely to begin care with the behavioral health clinician than those who didn't participate in the group intervention. Hypothesis 4 was supported by results showing that women who participated in the intervention demonstrated increased knowledge in content knowledge and skills related to resiliency.

Implications

It is imperative for medical professionals, including health service psychologists, to be aware of the impact of trauma and attachment disruptions on the patients they are treating. One popular measure, the Adverse Childhood Experiences Scale (ACES) provides a quick assessment

of patients' likely experiences of trauma which may be used as part of a patient's history. As noted in Chapter 1, the number and type of adverse experiences are highly correlated with trauma which in turn has been well documented to have a significant impact on the lives and health of women (Anda, 2006; Purkey, et al., 2018).

Resiliency Training

Resiliency training is an evidenced-based practice that has been shown to mitigate the negative impact of trauma (Helmreich et al., 2017). Although resiliency training has clearly shown specific benefits in the ability to increase positive emotions, self-esteem and self-efficacy through psycho-education and skills building, there was a gap in the research for providing this intervention for the vulnerable population of pregnant women. This gap needs to be addressed because research had shown that traumatic experiences, lead to high-risk behaviors which in turn, lead to a range of adverse birth outcomes, including length of gestation, and lower birth weight at delivery, which is colloquially referred to risk in "dates and weights" (Peasonin et al., 2016). In an attempt to address this gap, this study suggested that our demographically specific training had a significant effect or impact on the knowledge and skills to build resiliency during the prenatal period.

Not only did participants' knowledge and resiliency skills increase, results suggested that the training impacted their willingness to seek support from the behavioral health consultant (BHC). There may be far-reaching implications associated with the use of the BHC by pregnant women with a trauma history. Research suggests behavioral health support helps to mitigate the impact of childhood trauma, which may in turn reduce the type and amount of high-risk behaviors during the pregnancy. The reduction of high-risk behaviors, including substance use, poor nutrition and coping skills, may increase the potential for a healthier pregnancy and

newborn. As such, the potential benefit of resilience training could yield exponential positive effects.

The women who participated in the intervention also showed greater engagement in prenatal care as evidenced by more consistent attendance in the recommended appointments to monitor ongoing health of mom and baby. An extensive review of the literature not only failed to find outcome data regarding resiliency, it also failed to identify the potential impact on engagement in prenatal care. Taken together, a one-time resiliency training focused on the needs of pregnant women not only impacts knowledge and skill development, but it also potentially facilitates engagement in medical care including behavioral health services.

In taking a closer look at the demographic of women who self-selected to attend the training, we noticed they had a significantly lower number of ACEs ($M = 1.7$) vs. the national average of four or more. The combination of a sample of primarily majority culture women combined with the relatively low average of ACEs suggests we had a restricted demographic range. This result is consistent with research showing individuals with fewer ACEs are more likely to engage in medical services. This is concerning because recent data show that women from non-majority cultures are at greater risk for having experienced four or more types of ACEs (CDC, retrieved February 21, 2021) which highlights their risk during the prenatal period, and the corresponding risks to the infant. These potential risks extend beyond infancy with the outcomes which are most strongly associated with at least four ACEs including violence and drug abuse during adulthood (Tomaz & Castro-Vale, 2020). Further evidence of the relatively restricted range was evident in the percentage of women who scored in the category of secure attachment. Again, perhaps the women with more disrupted attachment styles need the resiliency training even more than those with secure attachment.

One way to increase attendance for women at higher risk would be to make this class mandatory. This approach parallels a similar requirement to attend the LaMaze class to learn evidenced-based practices in breathing and stress management during the delivery period. Our results reinforced the utility of a resiliency training as shown by the increased knowledge and coping skills, and engagement in services health services. By requiring the class, providers could get the information to the women who might need it the most.

Research has documented the role trauma and attachment play in a person's health and well-being; one clear implication may be the essential role of a skills-based mitigation intervention. This training provided opportunities for individual and group learning, including reflection and application to help solidify concepts of trauma, attachment, and resiliency. If the training showed a positive impact on the relatively restricted range of participants, we are hopeful that it would have a similar if not greater impact on women who were at higher risk.

Limitations

The two main limitations of this study were the sample size and inability to have a control group. Although effect sizes indicate improvement in resiliency-based knowledge and utilization of services, an increased sample would allow for a more robust research design and more extensive data analyses.

Future Research

Areas for future research may include generalizing this training to other clinical medical specialty areas which would allow for further validation and development of training for diverse medical populations. The knowledge that trainings are effective in increasing resiliency for one population may lead to adaptation of the present training for different populations who experience disparities in their care as a result of trauma and attachment disruptions.

Additionally, generalizing a mandatory training for multidisciplinary healthcare workers including doctors, nurses, and other medical staff could create further information regarding impacts on patient care. This early intervention may serve to cause a ripple effect of increased knowledge and understanding whereby those exposed to training will carry the knowledge gained into the systems and facilities where they complete their clinical work.

Summary

This study sought to describe the risk of adverse birth outcomes associated with prenatal trauma and insecure attachment, as well as the impact of resilience through the incorporation of a resiliency-based intervention offered early in pregnancy. The intervention targeted the risk of developing mood symptoms, identifying positive coping strategies, and highlighted meaningful resources women can access during the prenatal period to help support pregnancy health and wellbeing.

As reported in the results, Hypothesis 1, suggesting a positive correlation between the number of ACES reported by the mother and the type of attachment style reported was not supported. In contrast, Hypotheses 2 predicting a short evidenced-based resiliency intervention will increase engagement in prenatal care as measured by compliance with prenatal appointments were supported by the data. Hypothesis 3 was partially supported as women who participated in the intervention sought behavioral health services whereas, those who did not participate in the group intervention didn't seek services. Hypothesis 4 was supported by results showing that women who participated in the intervention demonstrated increased knowledge in content knowledge and skills related to resiliency.

The main limitation of this study was sample size due to the COVID-19 pandemic which forced the discontinuation of the class as the clinic closed to patient care. In an effort to create a

proxy for the control group, we identified a demographically matched sample to serve as a comparison group on the following variables: difference in number of prenatal appointments, no-show, and use of behavioral health services.

In taking a closer look at the demographic of women who self-selected to attend the training, we noticed they had a significantly lower number of ACEs ($M = 1.7$) versus the national average of four or more. The lower number of ACEs in this study suggests that the participants self-selected for the class as research shows lower risk individuals are more likely to engage in medical services. While the intervention attendance was important, we know it is vital that higher risk individuals participate in the intervention as well. One way to increase attendance for higher risk individuals would be to make this class mandatory. Additionally, it would be important to make training for the intervention mandatory for healthcare providers as they can both support and refer their patients. As research shows, patients who engage in medical services are at lower risk for complications, which is vital for pregnant women. Having providers buy-in to the intervention could ultimately get pregnant women into services at a quicker rate, which again, in turn, will help mitigate the effects of trauma and attachment disruptions, leading to healthier birth outcomes and babies.

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Appendix A

Instruments

INFORMED CONSENT

We invite you to take part in the research study *Integrate C.H.A.N.G.E. at Women's Healthcare Associates, LLC*, which seeks to identify a more effective means of intervening earlier in mental health concerns during pregnancy. Taking part in this study is entirely voluntary. We urge you discuss any questions about this study with our staff members.

A. PURPOSE AND BACKGROUND

Joanna Harberts is conducting research on identifying a more effective means of intervening earlier in mental health concerns during pregnancy. The purpose of your participation in this research is to help the researcher identify risk in patients. You were selected as a possible participant in this study because you are enrolled in the “New Mom’s” Class at Women’s Healthcare Associates.

B. PROCEDURES

If you agree to participate in this research study, the following will occur: You will respond to questions in the *Adverse Childhood Experiences Questionnaire*, *The Revised Adult Attachment Scale*, and the *Integrating C.H.A.N.G.E. Pre-post scale*. You will also be present during the *Integrating C.H.A.N.G.E.* presentation during the “New Mom’s” class, which will offer you education and support.

C. RISKS

Responding to certain prompts in the questionnaires may cause emotional discomfort. We have a behavioral health clinician on site to help you process your response if needed.

D. CONFIDENTIALITY

The records from this study will be kept as confidential as possible. No individual identities will be used in any reports or publications resulting from the study. All questionnaires will be given codes and stored separately from any names or other direct identification of participants. Research information will be kept in locked files at all times. Only research personnel will have access to the files and only those with an essential need to see names or other identifying information will have access to that particular file. After the study is completed, your responses will be destroyed.

E. BENEFITS OF PARTICIPATION

The anticipated benefit of your participation in this study is receiving education and identifiable support through the *Integrating C.H.A.N.G.E.* presentation.

F. VOLUNTARY PARTICIPATION

Your decision whether or not to participate in this study is voluntary and will not affect your relationship with the Women's Healthcare Associates. If you choose to participate in this study, you can withdraw your consent and discontinue participation at any time without prejudice.

G. QUESTIONS

If you have any questions about the study, please contact Joanna Harberts at Women's Healthcare Associates.

CONSENT

YOU ARE MAKING A DECISION WHETHER OR NOT TO PARTICIPATE IN A RESEARCH STUDY. YOUR SIGNATURE BELOW INDICATES THAT YOU HAVE DECIDED TO PARTICIPATE IN THE STUDY AFTER READING ALL OF THE INFORMATION ABOVE AND YOU UNDERSTAND THE INFORMATION IN THIS FORM, HAVE HAD ANY QUESTIONS ANSWERED.

Signature _____ Date _____ Research Participant

Adverse Childhood Experience (ACE) Questionnaire

(Felitti, 1985)

While you were growing up, during your first 18 years of life:1. Did a parent or other adult in the household **often** ...Swear at you, insult you, put you down, or humiliate you? **or** Act in a way that made you afraid that you might be physically hurt?

Yes No

If yes, enter 1 _____

2. Did a parent or other adult in the household **often** push, grab, slap, or throw something at you? **or** **Ever** hit you so hard that you had marks or were injured?

Yes No

If yes, enter 1 _____

3. Did an adult or person at least 5 years older than you **ever**...Touch or fondle you or have you touch their body in a sexual way? **or** Try to or actually have oral, anal, or vaginal sex with you?

Yes No

If yes, enter 1 _____

4. Did you **often** feel that no one in your family loved you or thought you were important or special? **or** Your family didn't look out for each other, feel close to each other, or support each other?

Yes No

If yes, enter 1 _____

5. Did you **often** feel that You didn't have enough to eat, had to wear dirty clothes, and had no one to protect you? **or** Your parents were too drunk or high to take care of you or take you to the doctor if you needed it?

Yes No

If yes, enter 1 _____

6. Were your parents **ever** separated or divorced?

Yes No

If yes, enter 1 _____

7. Was your mother or stepmother: **Often** pushed, grabbed, slapped, or had something thrown at her? **Or** **Sometimes or often** kicked, bitten, hit with a fist, or hit with something hard? **or** **Ever** repeatedly hit over at least a few minutes or threatened with a gun or knife?

Yes No

If yes, enter 1 _____

8. Did you live with anyone who was a problem drinker or alcoholic or who used street drugs?

Yes No

If yes, enter 1 _____

9. Was a household member depressed or mentally ill or did a household member attempt suicide?

Yes No

If yes, enter 1 _____

10. Did a household member go to prison?

Yes No

If yes, enter 1 _____

Revised Adult Attachment Scale

(Collins & Read, 1996)

Please use the scale below by placing a number between 1 and 5 in the space provided to the right of each statement.

	1-----2-----3-----4-----5	
	Not at all	Very
	characteristic	characteristic
	of me	of me
(1)	I find it relatively easy to get close to others.	_____
(2)	I find it difficult to allow myself to depend on others .	_____
(3)	I often worry that other people don't really love me	_____
(4)	I find that others are reluctant to get as close as I would like	_____
(5)	I am comfortable depending on others	_____
(6)	I <u>don't</u> worry about people getting too close to me	_____
(7)	I find that people are never there when you need them	_____
(8)	I am somewhat uncomfortable being close to others	_____
(9)	I often worry that other people won't want to stay with me	_____
(10)	When I show my feelings for others, I'm afraid they will not feel the same about me.	_____
(11)	I often wonder whether other people really care about me	_____
(12)	I am comfortable developing close relationships with others	_____
(13)	I am uncomfortable when anyone gets too emotionally close to me	_____
(14)	I know that people will be there when I need them.	_____
(15)	I want to get close to people, but I worry about being hurt	_____
(16)	I find it difficult to trust others completely.	_____
(17)	People often want me to be emotionally closer than I feel comfortable being	_____
(18)	I am not sure that I can always depend on others to be there when I need them.	_____

Integrate C.H.A.N.G.E. Pre-Post Measure

1. I understand how my personal history impacts pregnancy health.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

2. I understand resiliency and why it is important.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

3. Resiliency can be taught and developed to increase health

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

4. I can identify strategies for early intervention to support my health

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

5. Goals in C.H.A.N.G.E. will help my overall wellbeing

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

6. I am likely to use Behavioral Health Services if needed

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

7. I know how to access Behavioral Health resources

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

Appendix B

Integrate C.H.A.N.G.E.

Strengthening Resiliency
in Pregnant Women

What is Resiliency?

Facing life challenges
You can do it
Your history
Preventive
Giving you the essentials



Why Should You Care?

- Resiliency can be taught
- Resiliency = wellness
- Resistance to future stress
- Gain necessary resources



Why Intervene Early?

- Increased vulnerability to stress in pregnancy
- Early detection = reduction in symptoms
- Improved resistance to stress
- Improved outcomes



Integrate **C**.H.A.N.G.E.



- Identify negative thoughts
- Replace thoughts
- Thinking traps
- What is healthy thinking?

Integrate C.**H**.A.N.G.E.



- Physical activity
- Nutrition
- Sleep
- Benefits
- Resources



Integrate C.H.**A**.N.G.E



- My Red Flags
 - Signs & Symptoms
- Problem solve
- Turn solutions into actions
- Goal Setting
 - Small
 - Attainable
 - Clear



Integrate C.H.A.**N**.G.E.



MINDFULNESS

- Feel your feelings
- Curiosity vs. judgement
- Savor the moment
- It's not just one more thing
- Easy techniques

Integrate C.H.A.N.**G**.E.



- The good life
- Do something nice for a friend or stranger
 - Creates connection
- Thank someone.
- Smile
- Community groups
- Look out as well as in

Integrate C.H.A.N.G.**E**.




- Family and friends
- Therapeutic services
- Community groups
- Colleagues & neighbors
- Online support groups
- Faith community
- Invest in healthy relationships

Available Counseling Support



- Behavioral Health Services at Women's Healthcare Associates
 - Free to patients
 - Support during & after pregnancy
 - Support referrals to outside agencies
 - Referrals to long-term therapy

My C.H.A.N.G.E. Plan



My CHANGE Plan

Challenge – Identify a negative thought and replace.

Negative Thought: *I'm the worst mother. Anyone can do this better than me.*

Negative Thought:

Replacement Thought: *No one can love this baby like I do.*

Replacement Thought:

Health – Intentional steps for health.

- Walking
- Stretching
- Balanced meals
- Sleep when baby sleeps.

- _____
- _____
- _____
- _____

Action – Problem solving and goal setting.

Write a list of specific concerns pick 1 at a time to work on.

- _____
- _____
- _____

Set small daily goals: e.g. take a shower

- _____
- _____
- _____

Notice – Notice and feel your feelings.

- Mindful Driving
- Enjoy lunch/coffee with friends

- Mindfulness Exercise: CALM
- Gentle Birth Apps

- Intentional breathing
- Gentle walk

Good Life – Be good to yourself and others.

- Buy yourself some flowers
- Have a cup of tea
- Smile at someone

- _____
- _____
- _____

Engage – Reach out when you need help.

- Family: _____
- Mom's Group: _____
- Friend: _____
- Medical Provider: _____
- **Women's Healthcare Associates, Behavioral Health: (503) 538-2698**

Helpful Supports and Resources:

Clinic Resources: (503) 538-2698

- WHA Behavioral Health
- WHA Newberg Clinic Nursing Staff
- WHA Newberg OB Team

County Based Supports for Expecting Mothers:

- Public Health Nursing Program: (503) 434-7525
- A Family Place: (503) 472-4020
- Providence New Mom's Group: (503) 574-6595

Pregnancy Related Apps:

- The Bump



- What to Expect



- BabyCenter











Online Support Groups:

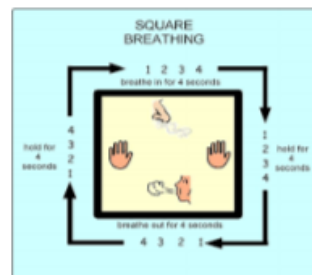
- Moms Supporting Moms
- Working Moms Connection

Relaxation and Grounding Exercises:

- Square Breathing
- CALM Muscle Relaxation

PROGRESSIVE MUSCLE RELAXATION

	Take 3 Deep Breaths
	Squeeze your foot for 5 seconds, Relax
	Squeeze your leg for 5 seconds, Relax
	Squeeze your stomach for 5 seconds, Relax
	Shrug your shoulders for 5 seconds, Relax
	Squeeze your arm & hand for 5 seconds, Relax
	Squeeze your whole body for 5 seconds, Relax
	Take 3 Deep Breaths



Appendix C

Curriculum Vitae

Joanna L. Harberts, MS, MA, LMFT

Education

George Fox University; Newberg, Oregon Doctor of Clinical Psychology (PsyD), Dissertation: Integrating C.H.A.N.G.E.: Strengthening Resiliency in Pregnant Women Committee: Mary Peterson, PhD, ABPP/CL (Chair), Jeri Turgesen, PsyD, ABPP, MSCP & Ryan Dix, PsyD, MS, NCTTP	Anticipated, 2022
George Fox University; Newberg, Oregon Master of Art in Clinical Psychology	Spring, 2019
California Lutheran University; Thousand Oaks, CA Master of Science in Counseling Psychology	Spring, 2007
Azusa Pacific University, Azusa, CA Bachelor of Arts in Political Science	Spring, 2002

Clinical Experience

Pre-Intern: Behavioral Health Provider

Providence Newberg Medical Center – Oncology Clinic June, 2020 – present

- Provide intake assessment, treatment planning, and individual counseling services to patients diagnosed with cancer
- Provide consultations and warm-handoffs with clinic physicians and staff
- Address patient presentation from a comprehensive biopsychosocialspiritual frame.
- Work as an active member of a multidisciplinary team, including MD/DO, NP, PA, PT, PharmD, RN, and Case Management.
- Provide crisis risk assessment and safety planning to patients who present to the clinic with emergent needs.
- Coordinate care with patients' health care teams
- Participate in weekly individual and group supervision
- Supervisors: Julia Terman, PsyD; Kacie Yost, PsyD

Pre-Intern: Behavioral Health Provider June, 2020-Present

Providence Newberg Medical Center - Chemical Dependency Clinic August, 2019 – present

- Provide psychological services in an integrated care setting. Services are characterized by brief, solution focused interventions addressing medical presentations, emotional health, chemical dependency and co-occurring conditions.
- Provide consultations and warm-handoffs with clinic physicians and staff
- Address patient presentation from a comprehensive biopsychosocialspiritual frame.
- Work as an active member of a multidisciplinary team, including MD/DO, NP, PA, PT, PharmD, RN and Case Management.
- Support the medical team with diagnostic clarification and treatment planning.
- Provide crisis risk assessment and safety planning to patients who present to the clinic with emergent needs.
- Supervisors: Jeri Turgesen, Psy D, ABPP, Julia Terman, PsyD

Practicum I & II & Pre-Intern: Behavioral Health Provider
Legacy Women's Healthcare Associates, LLC

May, 2018 – present
 Newberg, OR

- Provide intake assessment, treatment planning, and individual counseling services to patients
- Provide consultations and warm-handoffs with clinic physicians and staff in clinic and in hospital Labor & Delivery unit
- Address patient presentation from a comprehensive biopsychosocialspiritual frame
- Work as an active member of a multidisciplinary team, including MD/DO, NP, PA, PT, PharmD, RN and Case Management
- Coordinate care with patients' health care teams
- Participate in weekly individual and group supervision
- Supervisor: Jeri Turgesen, PsyD, ABPP

Behavioral Health Crisis Consultation Team Member
George Fox University

May, 2018 – May, 2020
 Newberg, OR

- Provide after-hours on call crisis and risk assessment support for Providence Newberg Medical Center and Willamette Valley Medical Center.
- Conduct evidence-based risk assessments, addressing risk of suicidality, homicidality, chemical dependency, and psychosis for patients presenting emergently in the Emergency Department and patients medically admitted to the Med/Surg Unit and ICU for both medical centers.
- Complete safety and discharge planning with patients and families
- Work with multidisciplinary medical teams, law enforcement, and EMS personnel.
- Provide direct consultation and recommendations regarding risk level and discharge
- Work with county collaborators to facilitate involuntary, county holds when patient risk requires
- Provide coordination of care, psychiatric admission and appropriate referrals for at-risk patients to inpatient or outpatient facilities.
- Participate in weekly supervision
- Supervisors: Mary Peterson, PhD, ABPP, Luann Foster, PsyD; Bill Buhrow, PsyD

Pre-practicum, Student Therapist Trainee
George Fox University Graduate School of Clinical Psychology

January 2018-April 2018
 Newberg, OR

- Provide 10 therapy sessions for two undergraduate students using Person-Centered therapy

- Complete treatment plan, including diagnosis, as well as weekly session documentation
- Received weekly supervision
- Supervisor: Glenna Andrews, PhD, MSCP

Licensed Marriage & Family Therapist
Newberg Counseling & Wellness

January, 2019 – July, 2020
 Newberg, OR

- Provide individual and family psychotherapy for children, adolescents & adults
- Provide intakes, treatment planning, and DSM diagnosis
- Provide crisis risk assessment and safety planning to patients who present to the clinic with emergent needs.
- Coordinate care with patients' care teams

Licensed Marriage & Family Therapist
Sundstrom Clinical Services

January, 2017 – May, 2018
 West Linn, OR

- Provide individual and family psychotherapy for children & adolescents
- Provide evaluations, assessments, DSM diagnoses, and development of treatment plans
- Provide crisis risk assessment and safety planning to patients who present to the clinic with emergent needs
- Specialize in pediatric trauma counseling

Licensed Marriage & Family Therapist & Practice Owner
Seaside Counseling Services

July, 2012 – January, 2017
 Ventura, CA

- Provide individual and family psychotherapy for children, adolescents & adults
- Provide evaluations, assessments, DSM diagnoses, and development of treatment plans
- Provide crisis risk assessment and safety planning to patients who present to the clinic with emergent needs
- Provide clinical supervision and consultation to MFT Interns
- Specialize in trauma counseling

Licensed Marriage & Family Therapist & Clinical Supervisor
Interface Children & Family Services

October, 2011 – April, 2016
 Oxnard, CA

- Provide individual, group, and family psychotherapy to a weekly caseload of 18 to 25 clients, with a culturally-sensitive, trauma-informed, strengths-based approach
- Complete comprehensive mental health assessments, DSM Diagnosis, and treatment evaluations
- Formulate, implement, and evaluate individualized Treatment Plans; coordinate Discharge Planning
- Provide client/family-centered advocacy, case management, and crisis intervention
- Complete clinical documentation adhering to Medi-Cal/EPSTD, county, and agency standards
- Facilitate Program to Evaluate and Treat Sexual Abuse (PETA) psychotherapy treatment group
- Establish and maintain collaborative relationships with community social services
- Provided Clinical supervision and consultation to MFT Interns and Trainees

Residential & Intensive Clinician – QMHP*Luke Dorf, Inc.*

February, 2010 – October, 2011

Tigard, OR

- Provided individual and group therapy, as well as case management for adults with severe and persistent mental illness
- Applied working knowledge of crisis intervention, assessment, prognosis, treatment, rehabilitation, and case management
- Prepared comprehensive Initial Assessments, in addition to progress notes, treatment plans, quarterly reports, and discharge summaries

Marriage & Family Therapist Intern – Primary Therapist*Guiding Our Youth Group Home*

October, 2008 – January, 2010

Simi Valley, CA

- Provided individual psychotherapy to adolescents with mental illness, emotional disturbances in a group home setting
- Prepared comprehensive written psychosocial evaluations and Child/Adolescent Initial Assessments, in addition to progress notes, weekly summary notes, treatment plans, quarterly reports, treatment team documentation, and discharge summaries

Supervision Experience

Fourth Year Student Mentor*George Fox University Graduate School of Clinical Psychology*

August, 2020 – Present

Newberg, OR

- Mentorship of 2 Practicum-I students
- Oversee clinical work, provide mentorship, guide professional development

Second Year Student Mentor*George Fox University Graduate School of Clinical Psychology*

August, 2018 – July, 2019

Newberg, OR

- Mentorship of a Pre-Practicum student during their transition period to graduate school, as well as professional development and support with initiating clinical training.

LMFT Licensed Supervisor*Seaside Counseling Services**Interface Children & Family Services*

July, 2012 – January, 2017

Ventura, CA

Oxnard, CA

- Clinical supervision to Marriage & Family Trainees & Interns
- Provide supervision in both individual and group settings
- Provide clinical support

Research Experience & Support

Clinical Foundations*George Fox University Graduate School of Clinical Psychology*

August, 2017 – May, 2018

Newberg, OR

- Participated in vertical clinical team that consisted of 4 students and a master's level student supervisor
- Presented case conceptualizations and provided peer-feedback

- Identified relevant legal and ethical issues of practice, discussed implementation of psychotherapy relevant to identified patient goals, outlined trainee roles and scope. Reviewed necessary elements of case management and record keeping
- Provided five sessions of simulated psychotherapy with peer cohort members to facilitate, understand, and develop Rogerian psychotherapy skills
- Group and Individual Peer Supervisor: Mark Thomas, QMHP

Clinical Team

August, 2017-Present

George Fox University Graduate School of Clinical Psychology

Newberg, OR

- Actively participate in yearly teams of first, second, third, and fourth year graduate students
- Present and discuss clinical case conceptualizations, relevant interventions based on theoretical orientations, and ethical and legal concerns to a team of approximately 6 students and a licensed clinical psychologist
- Actively receive, discuss and provide consultation and feedback in order to improve skill sets in clinical work and assessment
- Work collaboratively as a group to further clinical skills, professional development, and growth.
- *Group Supervisor:*
- Fall, 2017 – Spring, 2018: Mary Peterson, PHD, ABPP
- Fall, 2018 – Spring, 2019: Marie-Christine Goodworth, PhD
- Fall, 2019 – Spring, 2020: Joel Gregor, PsyD
- Fall, 2020 – Present: Shaun Davis, PsyD

Dissertation

Integrating C.H.A.N.G.E., Strengthening Resiliency in Pregnant Women

- Prelim Completed: October, 2019
- Data Collection Completed: August, 2020
- Advisor: Mary Peterson, PhD, ABPP

Research Vertical Team

May 2016 to present

George Fox Graduate School of Clinical Psychology

Newberg, OR

- Active engagement in vertical research team comprised of 1st through 4th year doctoral level trainees
- Assist in collaboration and development of dissertation and supplemental research projects. Support includes direct feedback, collaborative support in developing areas of interest, development of methods and completion of individual projects
- Team based areas of research interest include: Integrated care, Military populations, faith integration, and clinical training
- Supervisor: Mary Peterson, PhD, ABPP

Publications & Presentations

Harberts, J., Peterson, M., Turgesen, J., Dix, R. (2020). Integrating C.H.A.N.G.E.: strengthening resiliency in pregnant women. Presentation at the Collaborative Family Healthcare Association 2020 Conference, Philadelphia, PA.

Hamilton, S., Spencer, C., **Harberts, J.**, Reinhart, K., Peterson, M. (2020). Suicide risk assessment: an evaluation of graduate students with the columbia-suicide severity rating scale (C-SSRS). Poster session presented at the 2020 American Psychological Association Conference, Washington DC

Shaheed, J., **Harberts, J.**, Hamilton, S., Peterson, M. (2019). Healthy Life Choice: Using the school-based program to facilitate change. Poster session presented at the 2019 American Psychological Association Conference, Chicago, IL

Shumway, K., **Harberts, J.**, Wendler, D., Robinson, M., Peterson, M. (2018). Stress, social connectedness, and program satisfaction in graduate school. Poster session presented at the 2018 American Psychological Association Conference, San Francisco, CA

Teaching Experience

Introduction to Psychology – Undergraduate Level Course

November, 2017

George Fox University

Substitute Lecturer for Julie Oyemaja, PsyD

• Family Systems – PsyD Level Course

March, 2018

George Fox University

Substitute Lecturer for Mary Peterson, PhD, ABPP

Certificate Courses

Kuhnhausen, B. (Fall, 2018). Gender & Sexuality. George Fox University, Newberg, Oregon.

Kuhnhausen, B. (Fall, 2018). Attachment Theory in Clinical Practice. George Fox University, Newberg, Oregon.

Logan, K., (Spring, 2020). Trauma Treatment in Clinical Practice. George Fox University, Newberg, Oregon.

Logan, K., (Fall, 2020). Trauma Consultation Group. George Fox University, Newberg, OR.

Awards & Honors Received

HRSA Grant Recipient: 2019 – Present

Academic Leadership & Volunteer Work

Spring, 2020

Teaching Assistant

PSYD 522 Family Therapy

Graduate School of Clinical Psychology

George Fox University, Newberg, OR

Professor: Mary Peterson, PhD, ABPP

Spring, 2019 *Teaching Assistant*
 PSYD 522 Family Therapy
 Graduate School of Clinical Psychology
 George Fox University, Newberg, OR
 Professor: Mary Peterson, PhD, ABPP

Fall, 2018 *Teaching Assistant*
 Advanced Counseling
 George Fox University, Newberg, OR
 Professor: Kris Kays

Fall, 2017 – Fall, 2019 *Serve Day Volunteer*
 George Fox University
 Juliette's House

- India Partners, Eugene, OR; May, 2016; Traveled to India and led a training on trauma counseling interventions, as well as education on secondary trauma, for the local counselors and staff.
- Open Arms International, Portland, OR. February, 2010 – December, 2014. Participated in fundraising activities and donor relations, as well as traveled as part of a team to the Open Arms Village in Kenya.

Professional Presentations Attended

- Forster, C., *Intercultural Prerequisites for Effective Diversity Work*. George Fox University Colloquium. Newberg, OR.
- Marlow, D., (2019). *Foundations of Relationship Therapy – The Gottman Model*. Grand Rounds George Fox University, Newberg, OR.
- McMinn, L, & McMinn, M., *Spiritual formation and the life of a psychologist: looking closer to soul-care*. Colloquium presentation at George Fox University, Newberg, OR (2018).
- Pengelly, S. (2018). *Old pain in new brains*. Presentation at George Fox University Grand Rounds, Newberg, OR.
- Safi, D., & Millkey, A. (2019). *Opportunities in Forensic Psychology*. Colloquium Presentation George Fox University.
- Seegobin, W., Peterson, M., McMinn, M., & Andrews, G. (2017). *Difficult dialogues*. Diversity Grand Rounds presentation at George Fox University, Newberg, OR.
- Sordahl, J., (2017) *Telehealth*. Colloquium Presentation at George Fox University. Newberg, OR.

- Taloyo, C., (2018). *The history and application of interpersonal psychology*. Grand Rounds at George Fox University, Newberg, OR.
- Worthington, E., (2019). *Promoting forgiveness*. George Fox University Colloquium, Newberg, OR.

Professional Trainings Attended

- Collaborative Family Healthcare Association Annual Conference, Philadelphia, PA October, 2020
- Collaborative Family Healthcare Association Annual Conference, Denver, CO October, 2019
- American Psychological Association Annual Conference, Chicago, IL August, 2019
- American Psychological Association Annual Conference, San Francisco, CA August, 2018
- ACT Bootcamp, Praxis Continuing Education and Training, Burbank, CA February, 2018

Professional Memberships

- American Psychological Association – Student Member
- Collaborative Family Healthcare Association – Student Member