SENSE OF COHERENCE AND DAILY SPIRITUAL EXPERIENCE AMONG
PREGNANT, POST-PARTUM, AND PARENTING WOMEN IN RECOVERY FROM
SUBSTANCE ABUSE: AN EXPRESSIVE ARTS GROUP THERAPY
INTERVENTION

by

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ABSTRACT

MELIA ANN SNYDER. Sense of coherence and daily spiritual experience among pregnant, post-partum, and parenting women in recovery from substance abuse: An expressive arts group therapy intervention. (Under the direction of DR. PEGGY CEBALLOS).

Substance abuse has devastating social, economic, and public health consequences. For pregnant, post-partum, and parenting substance abusing women, fetal and child development are also of concern. Sense of Coherence (SOC), a salutogenic measure related to health promotion, and daily spiritual experiences (DSE) are strongly linked with reduced risk for relapse, persistence in treatment, and survival among substance abusing populations. Despite this evidence, few studies have directly attempted to promote a sense of coherence or spirituality outside of Twelve-Step groups in substance abuse treatment participants. This study has addressed these gaps by assessing the impact of an expressive arts group therapy intervention on the SOC and DSE of pregnant and post-partum substance abusing women ($N = 24$) in varying stages of recovery. A nonequivalent pretest/posttest group design was employed, and results indicated statistically significant gains in SOC but not DSE relative to an active control group. Based on these findings, future research using structured expressive arts interventions to increase SOC among addicted populations is recommended.

DEDICATION

I dedicate this work to the twelve women who volunteered to participate in the expressive arts group for this study. Your willingness to be vulnerable and to face significant challenges with creativity, grace, and courage is inspiring and paves paths of hope for you, your children and families, and others in recovery. Your stories, and the writing and art through which you expressed them, give meaning to this work. It has been an honor to share a portion of your recovery journey with you.

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LIST OF ABBREVIATIONS

AA   Alcoholics Anonymous

AMA   Against Medical Advice

AOD   Alcohol and Other Drugs

DSE   Daily Spiritual Experience

DSES   Daily Spiritual Experience Scale

EXA   Expressive Arts Therapy

ETC   Expressive Therapies Continuum

GRR   Generalized Resistance Resource

MMT   Methadone Maintenance Treatment

NA   Narcotics Anonymous

NIDA   National Institute on Drug Abuse

SAMHSA   Substance Abuse and Mental Health Services Administration

SOC   Sense of Coherence

SOC-OLQ   Sense of Coherence-Orientation to Life Questionnaire

SUD   Substance Use Disorder

TSP   Twelve-Step Program

CHAPTER 1: INTRODUCTION

Background

According to the National Survey on Drug Use and Health (NSDUH) conducted by the Substance Abuse and Mental Health Services Administration (SAMHSA, 2013), 9.2 percent of the population used illicit drugs or abused prescription medication in the past month, and 6.8 percent of the population was dependent on alcohol or had problems due to alcohol abuse. Such rates of substance use, abuse, and dependence have devastating effects on the individual, family, and community, creating one of the most complex public health issues facing society (Miller & Hendrie, 2008; NIDA, 2012; SAMHSA, 2004). Costs of substance include family disruptions, financial problems, chronic illness and disease, lost productivity, failure in school, domestic violence, child abuse, crime, and premature death (NIDA, 2012; SAMSHA, 2013). Estimates of the total overall costs of substance abuse in the United States, including those related to lost productivity, health, and crime, exceed $600 billion annually (NIDA, 2012). In contrast, $21 billion was spent on treatment in 2003 (French, Popovici, & Tapsell, 2008).

For pregnant, post-partum, and parenting women, substance abuse poses significant risks to maternal, fetal, and child health (Ebrahim & Gfroerer, 2003; Havens, Simmons, Shannon, & Hansen, 2009; U.S. DHHS, 1992). Between 2002 and 2003 NSDUH studies found that one in four women reported past month substance use during pregnancy (Havens et al., 2009). Prenatal substance abuse can lead to risks for

spontaneous abortion and stillbirth, preeclampsia, placental abruption, premature delivery, low birth weight, and sudden infant death syndrome (Robins & Mills, 1993) among others. Despite the risks of substance abuse to the mother, her unborn or dependent children, and the family, low enrollment and high attrition in treatment remain trends for this population (Grella, 1999; Kumpfer, 1991).

In order to minimize barriers to treatment for pregnant, post-partum, and parenting women, it is important to understand the unique risk factors faced by this population. As such, the literature supports gender-specific, comprehensive, and holistic recovery programs which address not only the substance use itself, but also the contributing factors that create, maintain, and perpetuate addiction (Grella, Joshi, & Hser, 2000). Such programs address the almost ubiquitous experience of trauma (e.g., childhood sexual abuse, domestic violence), poverty and economic disempowerment, interpersonal deficits, and mental and emotional health issues (e.g., anxiety, depression, shame) shared by these women (Ashley, Marsden, & Brady, 2003). Thus, substance abuse treatment for pregnant, post-partum, and parenting women must focus not only on treating and interrupting the cycle of addiction through abstinence or harm reduction approaches but also on strengthening and mobilizing the comprehensive resources needed to maintain sobriety.

Two such resources for promoting positive substance abuse treatment outcomes are spirituality and Sense of Coherence (SOC; Antonovsky, 1979). Those with a strong SOC have a sense of meaning in their lives, which provides motivation for coping and persisting in treatment (Chen, 2006; Feigin & Sapir, 2005). Additionally, those with a strong SOC understand the nature of their challenges and have access to the internal and

external resources needed for managing them. As such, a strong SOC is linked with treatment retention, abstinence, and survival (Andersen & Berg, 2001; Berg, 1996; Chen, 2006; Feigin & Sapir, 2005). Additionally, a strong SOC appears to mitigate substance-related problem behavior (Midanik, Soghikian, Ransom, & Polen, 1992; Midanik & Zabkiewicz, 2009; Nilsson, Starrin, Simonsson, & Leppert, 2007)

Like SOC, spirituality serves as a protective factor against substance abuse (Miller, 1998; Shorkey, Uebel, & Windsor, 2008). During the course of addiction, spiritual practices can be a particularly important resource for recovery (Carter, 1998; Koenig, George, Meador, Blazer, & Ford, 1994; Roland & Kaskutas, 2002). Spiritual practices support increases in ordinary Daily Spiritual Experiences (DSEs; Underwood & Teresi, 2002), which are linked with longer periods of sobriety, fewer relapses, and abstinence (Carter, 1998; Robinson et al., 2007; Robinson et al., 2011; Zemore & Kaskutas, 2004). Additionally, spirituality may strengthen SOC by contributing to a sense of meaning, the central factor of the construct (Antonovsky, 1979; 1987; Unterrainer, Ladenhauf, Moazedi, Wallner-Liebmann, & Fink, 2010; Unterrainer, Ladenhauf, Wallner-Liebmann, & Fink, 2011). In response, experts in the field call for substance abuse interventions that can enhance SOC and spirituality (Antonovsky, 1996; Chen, 2001; Robinson et al., 2011; Underwood & Teresi, 2002).

Expressive Arts Therapy (EXA) is a distinct discipline of integrated and intermodal arts practice that fosters human growth, development and healing (Appalachian Expressive Arts Collective, 2003). Rooted in existential, humanistic, postmodern, and phenomenological traditions, EXA is supported by the literature to promote spirituality, meaning-making, manageability, and understanding of life

experience (Appalachian Expressive Arts Collective, 2003; Eberhart & Atkins, 2014, McNiff, 2009; Knill, Levine, & Levine, 2005; Rogers, 1993). Additionally, EXA has been used with diverse populations and in diverse settings to promote positive mental health (Malchiodi, 2013; McNiff, 2009;) and substance abuse outcomes (Brooke, 2009). Thus, EXA presents itself as a potentially effective substance abuse treatment.

Statement of the Problem

Substance abuse treatment in the U.S. is currently conceptualized and delivered between the bookends of the medical and enlightenment models (Brickman et al., 1982; Marlatt, Baer, Donovan, & Kivlahan, 1988). The medical model views addiction as a disease and focuses on remediating a range of pathological biopsychosocial factors creating and maintaining addiction, while the enlightenment model suggests a spiritual solution for addiction through Twelve-Step Program (TSP) engagement. There is currently very little literature suggesting a salutogenic, or health promoting, approach to the treatment of addiction. Notably absent from the research are interventions structured to strengthen SOC and increase DSEs, two salutogenic constructs linked with positive substance abuse treatment outcomes.

The theoretical foundation, principles, and practice of EXA, however, align with the salutogenic framework described by Antonovsky (1979, 1987) and the framework of recovery outlined by SAMHSA (2011). The humanistic roots of EXA, and its emphasis on presence in particular, underscore the role of the relationship that the literature has identified as vital for women in substance abuse treatment (Chablani & Spinney, 2011; Robles, Flaherty, & Day, 1994). The existential foundations of EXA support its use with managing anxiety associated with fundamental issues of meaning, loneliness, death, and

the vacillation between fusion and separation that addicted populations must confront in the recovery process (Gheorghe, 2009). The postmodern roots of EXA recognize that meaning is influenced by language and by historical, cultural, and political discursive landscapes (Eberhart & Atkins, 2014). As such, EXA recognize that meaning is contextual, subjective, multiple, and co-constructed in relationship. The phenomenological roots of EXA support its use for both understanding the unique experiences substance abusing women and facilitating the shift in consciousness (often referred to as a "spiritual awakening") that characterizes recovery (AA, 2001). Despite existing literature that supports EXA as a promising intervention that promotes spirituality, meaning-making, manageability, and understanding of life's challenges (Knill et al., 2005; McNiff, 2009; Rogers, 1993), no study has examined the effects of an EXA group to promote SOC and increase dailiy spiritual practices as a substance abuse intervention.

<center>Conceptual Framework</center>

Antonovsky (1979) proposed salutogenesis as a coherent theoretical framework to guide the shift needed toward health promotion. In contrast to pathogenesis, salutogenesis is concerned with identifying the origins of health rather than disease and in promoting optimal well-being rather than treating and remediating pathology (Becker, Glascoff, & Felts, 2010). Salutogenesis conceptualizes health and wellness along a continuum (from optimal health to disease) rather than as dichotomous (sick/well). Salutary factors and Generalized Resistance Resources (GRRs) influence movement toward health. Salutary factors are practices or conditions that actively promote health and order in contrast to risk factors that are focused on identifying precursors to disorder.

GRRs refer to the properties of individuals, collectives, or situations that facilitate successful coping in the face of life's stressors. These resources help to avoid or combat psychosocial and physical-biochemical stressors while working together to promote a strong SOC in which the world makes sense cognitively, emotionally, and instrumentally (Antonovsky, 1996).

Antonovsky's (1979) development of the salutogenic theoretical framework came as a surprise. In a study investigating health adaptation among women in menopause, he found that most women in his study maintained emotional health despite the changes they were experiencing. Among Holocaust survivors who had been in concentration camps, however, only 29% evidenced good emotional health. While it was expected that Holocaust survivors would report lower levels of emotional and psychological wellbeing, Antonovsky was intrigued by the 29% who, despite the unimaginable trauma of the camps, displacement, and war, managed to maintain relative wellness.

Antonovsky's (1979) research revealed that thriving survivors shared the common view that life is meaningful, manageable, and comprehensible. Together these factors constituted what he referred to as sense of coherence, a general orientation toward life that contributes to one's ability to successfully navigate life's challenges and stressors. Meaning, the central component of the construct, provides motivation to cope; access to resources and supports for coping lead individuals to view challenges as manageable; and comprehensiveness suggests that challenges can be understood cognitively, emotionally, and instrumentally. Antonovsky's theory of salutogenesis was supported by the lived experience of Frankl (1959), who survived life in a concentration camp by finding meaning and purpose despite heinous conditions and unimaginable loss. Frankl's

existentialism is complementary to Antonovsky's salutogenesis underscoring the central

motivational role of meaning in creating the experience of health. SOC is understood to

interact with psycho-social-spiritual and genetic-constitutional resources and with one's

place in a socio-historical context. Together, these factors contribute the strength of

one's SOC to influence health and well-being. Antonovsky's continued research among

diverse populations supported the premise that those who manage stress and stay well

share the common factor of a strong SOC (Antonovsky, 1987, 1993, 1996). This premise

has been upheld regardless of race, ethnicity, gender, and social class.

Among substance abusing populations, a strong SOC is linked with treatment

retention (Andersen & Berg, 2001), abstinence (Chen, 2006), and survival (Fridell &

Hesse, 2006). Additionally, from a health promotion perspective, spirituality (a GRR)

and spiritual practices (a salutary factor) serve as important resources for avoiding and

combatting a wide range of stressors associated with substance use (Arévalo, Prado, &

Amaro, 2008). Specifically, spirituality may strengthen SOC by contributing to a sense

of meaning, the central component of the construct. Thus, experts in the field encourage

the promotion of spirituality in substance abuse treatment (Jarusiewicz, 2000).

The EXA group intervention conducted in this study was intentionally structured

to promote a strong SOC and daily spiritual practices to increase DSEs among pregnant,

post-partum, and parenting women in recovery from substance abuse. According to the

treatment protocol (see Appendix A), the sessions began with a grounding meditation,

followed by reflective writing, arts immersion, connection practices for sharing and

responding to art, and concluded with the expression of recovery intentions. The group

was structured as follows: (a) Session one was used as an opening to the group

experience; (b) Sessions 2 and 3 focused on enhancing the meaning component of SOC;

(c) Sessions 4 and 5 focused on enhancing the comprehensibility component of SOC; (d)

Sessions 6 and 7 focused on enhancing the manageability component of SOC; and, (e)

Session 8 was used for closing and termination of the group experience.

Purpose of the Study

Given the strong philosophical, theoretical, and practical alignment of EXA with

the components of SOC (meaning, manageability, comprehensibility), as well as the

integral role of daily spiritual practice in EXA (Eberhart & Atkins, 2014), a new

salutogenic substance abuse treatment model was implemented. The purpose of this

study was to examine the effectiveness of a salutogenic expressive arts group therapy

intervention intentionally structured to strengthen SOC and increase DSEs among

pregnant, post-partum, and parenting women in recovery from substance abuse.

Research Questions

The following research questions addressed current gaps in the literature and

guided the research:

1. Are there differences in SOC between pregnant, post-partum, and parenting
   women in substance abuse recovery who participate in an EXA group and
   those who participate in an active control group, after controlling for pretest
   SOC scores?

2. Are there differences in DSE between pregnant, post-partum, and parenting
   women in substance abuse recovery who participate in an EXA group and
   those who participate in an active control group, after controlling for pretest
   Daily Spiritual Experiences Scale (DSES) scores?

These research questions were explored using quantitative research methodology carried

out through a quasi-experimental pretest-posttest control group design.

The researcher hypothesized:

1. There will be differences in SOC between pregnant, post-partum, and

   parenting women in substance abuse recovery who participate in an EXA

   group and those who participate in an active control group, after controlling

   for pretest SOC scores. Specifically, those in the EXA group are expected to

   have modest but significant improvements in SOC compared with those in the

   active control group.

2. There will be differences in DSEs between pregnant, post-partum, and

   parenting women in substance abuse recovery who participate in an EXA

   group and those who participate in an active control group, after controlling

   for pretest DSE scores. Specifically, those in the EXA group are expected to

   have modest but significant increases in DSEs compared with those in the

   active control group.

The independent variable (IV) for this study was the expressive arts group therapy

intervention. The dependent variables (DVs) were posttest SOC and DSES scores, and

the covariates (CVs) were pretest SOC and DSES scores.

Data Analysis

The hypotheses were tested using two separate Analysis of Covariance

(ANCOVA) tests. According to Tabachnick and Fidell (2007), this statistical procedure

can be used to examine mean differences between groups after adjusting for pre-existing

differences on the CV. This practice is common in quasi-experimental designs where random assignment to groups is not possible. Prior to running the major analysis, data were screened for missing values, univariate outliers, and normality. Additionally, the assumptions of normality, homogeneity of variances, linearity, homogeneity of regression were tested. Hypothesis 1 was examined through an ANCOVA to assess posttest differences in SOC scores between the treatment and active control groups, after controlling for SOC pretest scores. Hypothesis 2 was examined using a second ANCOVA to assess posttest differences in DSES scores between the treatment and active control groups, after controlling for DSES pretest scores. The proposed hypotheses were considered to be supported (and the null hypotheses rejected) if p-values were less than .05.

Significance of the Study

According to the ACA Code of Ethics (2005) researchers are called upon to promote an understanding of conditions that lead to a more healthy and just society. By conducting research within the health promotion theoretical framework of salutogenesis, the investigator is intentionally attending to this ethical obligation. Additionally, this study contributes to clinical practice, counselor education and training, and multidisciplinary research in the fields of expressive arts and addiction. Currently, there is a dearth of literature documenting interventions intentionally structured to promote SOC and spiritual practices among addicted populations, including pregnant, post-partum, and parenting women, despite their role in predicting treatment retention, abstinence, and survival and promoting positive substance abuse treatment outcomes. The present study addresses this gap by introducing an expressive arts group therapy intervention

intentionally structured to strengthen SOC and promote spiritual practices for recovery among pregnant, post-partum, and parenting women.   Based on the outcomes of this study, clinicians in the field of addictions, counseling, expressive arts, and other helping professions will be able to apply this salutogenic treatment model in similar settings or adapt it for different populations.

Training and education in addiction counseling currently centers on the disease model, though increasing attention has been given to the role of resilience, spirituality, and positive psychology as the field has evolved (Miller, 2011). This study contributes to the continued evolution of addiction education, training, research and practice by introducing a salutogenic approach to conceptualizing and treating addiction. In counselor education and training programs, for instance, the role of SOC, spiritual practices, and DSEs in recovery could be added to the curriculum. Students could be encouraged to design their own evidence-supported salutogenic intervention to strengthen these domains and promote positive treatment outcomes. The piloting of such interventions would significantly contribute to the literature base across disciplines.

Despite the strong link between EXA and the theory of salutogenesis, education and training in the expressive arts do not often make this connection. The present study provides a model for integrating the practice of EXA within a salutogenic theoretical framework. For EXA students, such a model could provide structure for conceptualizing clinical work and developing effective interventions.   Although the EXA literature base is growing (e.g., Eberhart & Atkins, 2014; Kim, Kirchhoff, & Whitsett, 2011), it still widely relies on anecdotal evidence, methodologically flawed studies, or experimental studies from other fields (i.e., art therapy and psychology). This quasi-experimental

study addresses many of these limitations and provides a model for future quantitative research in the EXA field. Finally, this study encourages cross-disciplinary research oriented toward conceptualizing, developing, and implementing innovative treatments designed to promote wellness for all people, including the disenfranchised.

Delimitations

The delimitations of the study include the following:

1. The literature review focuses on chemical addiction in general and among pregnant, post-partum, and parenting women in recovery. It is beyond the scope of this study to review the literature on process addictions. This focus was driven by the treatment site's requirement that all women admitted to the program have a primary or co-occurring substance abuse diagnosis.

2. Study participants were volunteers from a clinical population of pregnant, post-partum, and parenting women at a gender-specific substance abuse treatment facility in the Southeastern United States. Results may not generalize to women who are not pregnant, post-partum, or parenting or who reside in other regions or countries. The focus on this population was driven by the research site's admission criteria.

3. The researcher investigated the effects of a salutogenic EXA intervention using a quantitative quasi-experimental pretest-posttest control group design, which did not allow for insight into group members' lived experience of the intervention. A quantitative rather than qualitative approach was chosen to address existing gaps in the literature and to work within the constraints of a community-based treatment setting.

4. The brief nature of the intervention (8 sessions over 1 month) did not allow assessment of changes that may occur if a longer intervention was possible.

5. Only one instrument deriving from salutogenic theory (SOC-13) and only one instrument originating from the spirituality literature base (DSES) were used. These instruments were chosen specifically for their efficacy in promoting positive substance abuse treatment outcomes.

Limitations

The results of this study may have been affected by the following factors that are beyond the control of the researcher:

1. The self-report assessments used in this investigation may have been affected by the subjective judgment of the participants.

2. The self-report assessments have not been utilized before with pregnant, post-partum, and parenting women in recovery.

3. Women in the treatment setting are affected by a variety of factors outside of the researcher's control. There are multiple aspects of treatment such as level changes, drug screen results, and social service or legal involvement that may have influenced the women's experience and self-reporting.

4. The research site does not have a large enough population to draw participants from for the active control group and treatment group from the same phase of treatment. Additionally, random assignment to groups was not possible as treatment at the site is conducted in pre-existing intact groups. Therefore, the active control and treatment groups differed according to length of time in

recovery and phase in treatment. ANCOVA analyses were used to adjust for pre-existing differences in the non-equivalent intact groups.

5. Participants were volunteers and may somehow differ from those who did not volunteer to participate in the study.

6. Given the nature of the comprehensive treatment environment, the women may have communicated with one another outside of their participation in the expressive arts group therapy intervention and may have discussed aspects of their experience. This reality may have threatened the assumption of independent observations in the statistical analysis.

7. Two separate ANCOVA procedures were used in order to meet the assumptions of the statistical test given the small sample size.

8. The addition of a covariate decreased the power of the statistical analysis, as a degree of freedom was lost.

<div align="center">Assumptions</div>

The assumptions made included:

1. Substance abuse is a treatable biopsychosocial-spiritual condition.

2. Internal resources (SOC and DSEs) can be strengthened in order to promote positive substance abuse treatment outcomes. This change can be measured.

3. Addiction may be conceptualized and treated within a salutogenic theoretical framework despite the dominant medical model paradigm.

4. Participants answered honestly on self-report assessments.

5. Expressive arts group therapy is an appropriate intervention for the treatment population.

6. Expressive arts group therapy as described in the treatment protocol (See Appendix A), is an appropriate intervention to strengthen SOC and increase DSEs.

7. Implementation of the intervention will be provided according to the treatment protocol.

8. Participants will engage in the intervention as described in the treatment protocol.

Threats to Validity

Internal Validity

There were several threats to internal validity in this study, which may serve as alternative explanations for research findings. History may have presented a threat as participants received treatment other than just the intervention. Elements of this additional treatment cannot be controlled for and may have caused changes in the dependent variables. Additionally, maturation may have presented a threat to the internal validity of the study, as participants naturally change over time. Time effects, therefore, may present an alternative explanation for changes in the dependent variables. Familiarity with the instruments may have presented testing threats to internal validity, as participants were administered both a pre-test and a post-test. Additionally, responses on the initial administration of the instruments could have been affected by chance events (e.g., level changes) resulting in extreme scores. These factors were likely to not be present during posttest administration, and thus results could regress to the mean. By adding a comparison group that is similar to the treatment group, the researcher intended to rule out threats to internal validity due to history, maturation, testing, instrumentation,

and regression. In doing so, the researcher assumed that these threats happened the same to both groups and therefore could not explain posttest differences.

Despite the addition of a comparison group, selection and additive effects of selection may have presented ongoing threats to internal validity. Selection concerns exist, as the groups were not equivalent. These pre-existing differences between the treatment and control groups, however, were accounted for through statistical procedures using ANCOVA tests. Additive effects of selection, however, are more difficult to control for in quasi-experimental designs. That is, if the treatment and active control group respond differently to an external event, mature differently, drop out of treatment at different rates, or are measured more sensitively by the instruments, these threats may account for group differences at the end of the study. In order to minimize these threats to internal validity, the researcher recruited participants that were stabilized and engaged in treatment for the experimental group, thus mitigating attrition. Additionally, the researcher oversampled the control group, as they were more likely to drop out of treatment. Additionally, standardized instrumentation was used and was not altered from pretest to posttest. Finally, the groups received the same treatment except for the intervention. In its place, the active control group participated in a family process group, which focused exclusively on issues related to parenting, and a relapse prevention group.

In addition to the threats already discussed, contamination may have presented a threat to internal validity, as it cannot be guaranteed that the treatment group did not share their experience with those in the active control group. As a result, the active control group could react with: (a) resentment and perform worse (positively skewing results); (b) rivalry and perform better (negatively skewing results); or, (c) attempt to

apply the treatment to themselves, thus diffusing the treatment effects in the experimental group. This threat was addressed through the signing of a confidentiality form and by establishing a norm that group would not be discussed outside of the sessions themselves. This is a standard expectation at the treatment center and a culture of non-disclosure was already in place. Additionally, the active control group was informed that they would have an opportunity to participate in the treatment following the conclusion of the study. Experimental bias remained a possible threat to internal validity, as this was not a double blind study and the researcher could have inadvertently behaved differently to members of the active control and experimental groups. Finally, the innovative nature of the intervention may have produced novelty effects. The participants' resulting energy, excitement, and enthusiasm to an expressive arts group therapy intervention could have skewed results, making it difficult to know if treatment was effective. This threat could not be controlled for.

External Validity

There were several factors that impacted the generalizability of the proposed study's results. First, the instruments used in this study, though reliable and valid and well supported in the general addictions literature, have not been used before with pregnant, post-partum, and parenting women in recovery from substance abuse. Additionally, external validity was limited by the study's small sample size ($N = 24$). Because this study occurred in a treatment setting, it did not provide the degree of control available in true experimental designs. The intention, however, was to create an ecologically valid study that would translate to real world settings. The specificity of the research site, however, as a comprehensive, gender-specific treatment program for

pregnant, post-partum, and parenting women also limits generalizability to other settings and populations of women. Given these threats to external validity, replication of the current study is recommended with a larger sample size and in multiple sites with different substance abusing populations.

Definition of Key Terms

For the purposes of this study the following operational definitions were applied:

Salutogenesis

A term coined by medical sociologist Antonovsky (1979) that provides a theory to guide the promotion of human health and well-being in contrast to pathogenesis which focuses on factors that cause disease.

Sense of Coherence (SOC)

Antonovsky (1987) defines SOC as:

A global orientation that expresses the extent to which one has a pervasive, enduring though dynamic feeling of confidence that (1) the stimuli deriving from one's internal and external environments in the course of living are structured, predictable and explicable; (2) the resources are available to one to meet the demands posed by these stimuli; and (3) these demands are challenges, worthy of investment and engagement. (p. 19)

SOC will be measured using the Sense of Coherence Orientation to Life Questionnaire (SOC-OLQ; Antonovsky, 1987).

Spirituality

This variable is a multidimensional construct lacking one specific definition. For purposes of this study, the Fetzer Institute's (1999) conceptualization of spirituality, which has been used in past social and medical research, will be employed:

Spirituality is concerned with the transcendent, addressing ultimate questions about life's meaning, with the assumption that there is more to life than what we see or fully understand. Spirituality can call us beyond self to concern and compassion for others. (p. 2)

Daily Spiritual Experience (DSE)

Underwood and Teresi (2002) define DSE as "a person's perception of the transcendent (God, the divine) in daily life and his or her perception of his or her interaction with or involvement of the transcendent in life" (p. 23). Experience of DSEs were measured by, the Daily Spiritual Experience Scale (DSES; Underwood & Teresi, 2002).

Substance Abuse

The DSM-IV-TR (APA, 2000), defines substance abuse as a "maladaptive pattern of substance use manifested by recurrent and significant adverse consequences related to the repeated use of substances." (p. 198)

Addiction

Addiction is operationally defined as a biospsychosocial-spiritual condition that has progressed to a disease state on the salutogenic health/ease-wellness/disease continuum. According to NIDA (2012), this chronic, relapsing disease is characterized

by structural and functional brain changes that result in compulsive drug seeking and use despite harmful consequences.

Recovery

SAMHSA (2011) defines recovery as, "A process of change through which individuals improve their health and wellness, live a self-directed life, and strive to reach their full potential." (Working definition of recovery, para 2)

Expressive Arts (EXA)

Eberhart and Atkins (2014) define EXA as "A field of professional theory and practice dedicated to using any or all of the arts together in an interdisciplinary and integrated way in the service of enhancing quality of life." (p.16)

Expressive Arts Therapy (EXA)

The Appalachian Expressive Arts Collective (2003) defines expressive arts therapy as follows,

> The practice of using imagery, storytelling, dance, music, drama, poetry, movement, dreamwork, and visual arts together, in an integrated way, to foster human growth, development, and healing. It is about reclaiming our innate capacity as human beings for creative expression of our individual and collective human experience in artistic form. Expressive arts therapy is also about experiencing the natural capacity of creative expression and creative community for healing. (p. 3)

Expressive Arts Group Therapy

The integrated use of the arts in group settings to foster human growth, development, and healing. Expressive arts group therapy is process, rather than product

oriented, and integrates group theory with the principles and practice of expressive arts. According to Kim et al. (2011, p. 356),

> Through individual and collective art-making, the group provides participants with both mirroring and witnessing, an interpersonal experience that allows individuals and the group as a whole to achieve the curative factors of group therapy described by Yalom (1995).

Conclusion

Chapter One began by providing background on substance abuse in the general population and among pregnant, post-partum, and parenting women in particular. The constructs of spirituality and SOC as resources for healing were then introduced. Gaps in the current literature were identified in the problem statement, and a conceptual framework for guiding the study was discussed. Next, the purpose of the study and the specific research questions were identified, and the professional significance of the study was described. Then, the delimitations, limitations, assumptions, and threats to validity of the study were identified. Finally key terms and operational definitions were introduced.

Organization of the Study

This chapter has provided an introduction to the study "Sense of coherence and daily spiritual experiences among pregnant, post-partum, and parenting women in recovery from substance abuse: An expressive arts group therapy intervention." Chapter Two provides a thorough review and critique of the literature related to all variables, further develops the guiding conceptual framework of salutogenesis, and introduces the treatment model. Chapter Three introduces the methodology implemented in the study

including identification of the context for the study and study participants, evaluation of instrumentation, and discussion of procedures used in carrying out the study. Chapter Four presents the results of the study. Chapter Five discusses the findings and their significance, the limitations and contributions of the study, and recommendations for future research.

CHAPTER 2: REVIEW OF THE RELATED LITERATURE

This study investigated the impact of an expressive arts group therapy

intervention on the Sense of Coherence (SOC) and Daily Spiritual Experiences (DSE) of

pregnant, post-partum, and parenting women in recovery from substance abuse. The

following review of the literature is divided into seven major sections. The first section

addresses substance abuse in the general population, providing background information

on the prevalence and costs of addiction. The second section discusses substance abuse

among pregnant and post-partum substance abusing women in particular, including a

review of gender-specific risk factors and treatment considerations. The third section

introduces the conceptual framework of salutogenesis and the role of the salutogenic

construct of SOC in addiction and recovery. The fourth section introduces the role of

spirituality in addiction treatment and examines the empirical literature related to

spirituality in addiction and recovery. The fifth section introduces the field of Expressive

Arts Therapy (EXA) and related empirical literature in mental health and substance abuse

treatment. The sixth section provides a detailed explanation of the proposed treatment

protocol for the expressive arts group therapy intervention. The seventh section discusses

the implications of the proposed study for cross-disciplinary research, training, and

practice. The chapter ends with a conclusion summarizing the literature review.

Substance Abuse

Substance abuse, as defined in *Diagnostic and Statistical Manual of Mental Disorders 4th edition, Text Revision* (DSM-IV-TR; American Psychological Association [APA], 2000), is a "maladaptive pattern of substance use manifested by recurrent and significant adverse consequences related to the repeated use of substances" (p. 198). Substance abuse that progresses to dependence, has historically been referred to as addiction, which the National Institute on Drug Abuse (NIDA, 2012) defines as a chronic, relapsing disease that impacts brain structure and functioning and is characterized by compulsive drug seeking and use despite harmful consequences. Dependence, however, is often the body's natural response to addictive substances (both legal/prescribed and illicit). The current fifth edition of the DSM (DSM-V; APA, 2013), conceptualizes substance use disorders (SUDs) along a continuum from mild to severe, without the historical distinctions between abuse and dependence.

Regardless of position along the continuum, substance use has become a national epidemic in the United States with devastating social, health, and economic consequences (Miller & Hendrie, 2008; NIDA, 2012; Substance Abuse and Mental Health Services Administration [SAMHSA], 2013). According to the 2012 National Survey on Drug Use and Health (NSDUH; SAMHSA, 2013) 22.2 million persons aged 12 or older met criteria for a past year SUD as defined by the DSM-IV-TR (APA, 2000). Of these 22 million persons, 2.8 million were classified with dependence or abuse of both illicit drugs and alcohol, 4.5 million with dependence or abuse of illicit drugs but not alcohol, and 14.9 million with dependence or abuse of alcohol but not illicit drugs. Rates were even higher for current illicit drug users, with an estimated 23.9 million Americans reporting past

month illicit drug use (SAMHSA, 2013). The specific illicit drugs with the largest

numbers of persons with past year dependence or abuse in 2012 were marijuana

(4.3 million), pain relievers (2.1 million), and cocaine (1.1 million).

Among those who fall along the SUD continuum, young adults appear to be

particularly at risk (Hawkins, Catalano, & Miller, 1992). According to SAMSHA (2013),

the rate of current illicit drug use was higher among young adults aged 18 to 25

(21.3 percent) than among youths aged 12 to 17 (9.5 percent) and adults aged 26 or older

(7.0 percent) (See Figure 1).
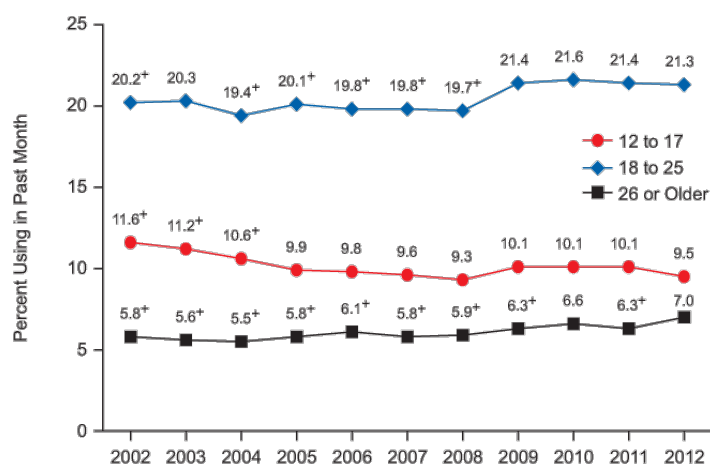
FIGURE 1: Past month illicit drug use among persons aged 12 or older, by age: 2002-

2012 (SAMHSA, 2013)

The rates of substance abuse and the particular vulnerability of young adults to higher

rates of use, abuse, and dependence suggest the need for strategic and innovative

prevention and intervention efforts (Hawkins et al., 1992; Miller & Rollnick, 2002).

Without such efforts, these young adults are likely to continue use despite increasing role

responsibilities.

Substance abuse—involving drugs, alcohol, or both—is associated with a range of

destructive economic, health, and social conditions (Hawkins et al., 1992; Miller &

Hendrie, 2008; NIDA, 2012; Rice, 1999). Costs of substance abuse include family disruptions, financial problems, premature death and chronic disease, lost productivity, failure in school, domestic violence, child abuse, crime, and premature death (NIDA, 2012; SAMSHA, 2013). As such, substance abuse is one of the most complex public health issues facing society. Estimates of the total overall costs of substance abuse in the United States, including lost productivity, health, and crime-related costs exceed $600 billion annually (NIDA, 2012). In contrast, substance abuse treatment expenditures in 2003 were estimated at $21 billion (French, Popovici, & Tapsell, 2008).

Despite high rates of substance abuse among the general population and specifically among young adults, treatment utilization remains low and ambivalence high among this population (Hawkins et al., 1992; Miller & Rollnick, 2002; SAMSHA, 2013). Of the 20.6 million persons aged 12 or older who met criteria for substance abuse treatment in 2012, only 5.4% felt that they needed such treatment for their alcohol or drug use problem and of these, only 31.3% sought treatment (SAMSHA, 2013). According to combined 2009-2012 data, the primary barriers to receiving treatment among this group of people were a lack of insurance coverage and an inability to pay premiums (38.2 percent). Without increased utilization of effective treatment, costs to society will continue to grow (Hawkins et al., 1992; Miller & Hendrie, 2008; NIDA, 2012; Rice, 1999). Among the most vulnerable group of young adults are pregnant, post-partum, and parenting women (Brady & Ashley, 2005; Ebrahim & Gfroerer, 2003; U.S. Department of Health and Human Services [DHHS], 1992). This population will be the focus of the proposed study, with related literature reviewed in the following section.

Substance Abuse Among Pregnant, Post-Partum, and Parenting Women

For pregnant and post-partum substance abusing women, the negative consequences of substance abuse are even greater with significant risks to maternal, fetal, and child health. (Ebrahim & Gfroerer, 2003; Havens, Simmons, Shannon, & Hansen, 2009; U.S. DHHS, 1992). According to data from the 2002 and 2003 NSDUH studies, one in four women reported past month substance use during pregnancy (Havens et al., 2009). Despite high rates of substance use during pregnancy, results from the 2002 Treatment Episode Data Set (SAMSHA, 2004) indicated that only 4% of substance abuse treatment admissions were known to be pregnant. The gap between substance use in pregnancy and treatment utilization by this population suggests significant risks to maternal and fetal health as well as to child and family development.

The National Pregnancy and Health Survey (U.S. DHHS, 1992) reported that 19% of newborns had been exposed to alcohol, 21% to nicotine, and 6% to illicit drugs. Such exposure leads to increased risk for spontaneous abortion and stillbirth, preeclampsia, placental abruption, premature delivery, low birth weight, and sudden infant death syndrome (Robins & Mills, 1993). Prenatal drug and alcohol exposure can also lead to impairments in maternal-child attachment as well as deficits in cognitive, social, academic, physical, emotional health, growth, and functioning. In utero opiate exposure, for instance, can lead to neonatal abstinence syndrome, in which the infant experience painful and life-threatening withdrawal symptoms (Hamilton, 2012). Likewise, prenatal alcohol exposure can lead to fetal alcohol spectrum disorders, causing potentially lifelong physical, mental, behavioral, and learning disabilities (May & Gossage, 2011).

Additionally, research suggests that women who use substances during pregnancy continue to do so at increased levels following delivery leading to impairments in multiple domains of functioning as well as increased risk of early mortality (Bailey, Hill, Hawkins, Catalano, & Abbot, 2008; Berg, Lynch, & Coles, 1998).

Characteristics of pregnant, post-partum, and parenting women are broad; however identifiable patterns do exist. Based on the nationally representative NSUDH 2003-2003 data, Havens et al. (2009), identified the following correlates of prenatal substance abuse: (a) current psychopathology, (b) being unemployed, (c) being unmarried, and (d) being of non-Hispanic ethnicity. These findings support past research suggesting that substance abuse and mental health disorders are often comorbid (Bucholz, 1999; Helzer, 1988); that work-based drug-screening and access to health care serve as a protective factors (Carpenter, 2007); and that stress and lack of support associated with being the sole financial and caretaking provider present a significant risk for substance abuse among pregnant, post-partum, and parenting women (Duncan, Wilkerson, & England, 2006; O'Doherty, 1991). Additionally, the results reflect trends in other nationally representative studies indicating a higher prevalence of drug use among White women (Caetano, Ramisetty-Mikler, Floyd, & McGrath, 2006; Perreira & Cortes, 2006). Despite such evidence, pregnant women of color continue to be screened for and diagnosed with substance use disorders at a higher rate than pregnant White women reflecting an unrecognized systematic bias among prenatal caregivers (Havens et al., 2009).

In addition to recognizing and remediating bias in screening for substance abuse, practitioners should be aware of cultural differences in patterns of substance abuse.

Jesse, Graham, and Swanson (2006), for instance, surveyed 130 diverse low-income women to determine correlates of substance abuse. They found that all women who abused illicit drugs and alcohol also smoked. African American women, however, were four times more likely to abuse substances if they smoked during pregnancy than if they did not. Stress and lack of social support were significant risk factors for African American pregnant women while low self-esteem, depression, and history of physical abuse and domestic violence were predictive of smoking and substance abuse among White pregnant women.

  Jesse et al. (2006) suggested that substance use in pregnant women increases psychosocial risks, as either a precursor or consequence of behavioral risks. In their longitudinal study of 323 predominantly African American pregnant women from two inner-city clinics, for example, Bendersky, Alessandri, Gilbert, and Lewis (1996), found that 32.5% of subjects used cocaine, which was associated with co-occuring tobacco, alcohol, and to a lesser extent marijuana use. Women who used cocaine during pregnancy tended to be older and have higher rates of prior pregnancy and births than non-cocaine using women. Additionally, cocaine-using women experienced disrupted and unsupportive life circumstances, including more frequent moves and less social support than non-cocaine using women, with 80% relying on public assistance as their main source of income. These women were more likely than non-cocaine using women to live in high-risk substance using environment and have family histories of drug and alcohol abuse. Interestingly, results were similar for those who smoked cigarettes and used alcohol, but not cocaine. The population characteristics of substance abusing

pregnant, post-partum, and parenting women suggest the need to consider gender-specific factors impacting use and treatment utilization.

Women face gender-specific factors that both increase risk and impact treatment-seeking behavior. These differences were summarized by Brady and Ashley (2005). First, in contrast to males, women are more likely to bear the responsibility for raising children and to avoid treatment due to fear of losing custody or not having access to adequate childcare. Additionally, women who rely on Temporary Assistance for Needy Families (TANF) often lose their entitlement benefits, either because they cannot work due to their addiction or because drug screening disqualifies them from receiving the benefits. Women are also more vulnerable to the physiological effects of drugs due to biological differences in how the body processes substances. As such, they are more vulnerable to physical and mental health problems, impairment, and mortality than their male counterparts. Substance using females also have higher rates of co-occuring mental health disorders and often cite trauma as the precipitating event to drug use. Additionally, women are more likely than men to report greater dysfunction in the family of origin leading to parenting deficits and social services involvement. Likewise, women who abuse substances are often in dependent relationships dominated by their partner, who influence (often not allowing) their ability to seek treatment. Finally, Brady and Ashley (2005) noted the role of shame, social stigma, and guilt as barriers to treatment; for minority women, racism in addition to sexism, may act as an additional barrier. The following review of related empirical literature will further illuminate gender-specific risk and protective factors.

Empirical Literature

In a qualitative study of 35 poor, homeless, chemically dependent women living in an urban recovery shelter, every woman interviewed reported the following: (a) a history of abuse and abandonment; (b) a family history of addiction or an intimate partner with addiction; (c) early adolescent sexual involvement, teenage pregnancy, and early marriage or cohabitation; (d) a marginalized and impoverished existence; and (e) extreme loneliness and deep emotional pain that was numbed by increasing substance use (Yancey, 2005). Themes of sexism, racism, and poverty were common threads in each woman's story. These complex structural and social problems have both clinical and political implications for substance abuse treatment and policy. Nelson-Zlupko, Kauffman, and Dore (1995) suggested the need for a feminist sociological perspective in understanding, preventing, and treating substance abuse among women. Through this lens, the limitations of the biomedical model become apparent, beckoning a holistic approach that recognizes and addresses the systemic risk factors and barriers that create, maintain, and perpetuate addiction among women.

In an effort to expand the literature base related to maternal risk factors for substance use, Coleman, Reardon, and Cougle (2005) investigated the role of pregnancy wantedness (wanted, not wanted, mistimed) and prior pregnancy loss (miscarriage, stillbirth, induced abortion) to determine correlates with marijuana, alcohol, tobacco, cocaine, and other illicit drug use. Among the sample of mostly African American, lower income women ($N = 1020$), they found that a history of one induced abortion was associated with an increased risk for using marijuana ($OR = 3.01$, $p = .025$), cocaine ($OR = 5.06$, $p = .013$), crack ($OR = 2.98$, $p = .006$), and other illicit drugs in later pregnancies

compared with women who had not had induced abortions. Likewise, women with a history of two or more abortions were twice as likely as women who had not had an abortion to smoke during later pregnancies.

Although causation cannot be assumed, Coleman et al. (2005) suggested that women who have experienced an induced abortion might use substances to mask or manage depression, anxiety, and guilt associated with their choice. Alternatively, women who use substances may be more inclined to abort. Limitations of this correlational study include reliance on self-report data and the potential for high levels of concealment among those who have voluntarily terminated pregnancy. Nevertheless, the results suggest the importance of screening for abortion history and emotional response to voluntary pregnancy loss when treating women with substance abuse issues. Furthermore, women should be counseled about the potential for emotionally deleterious effects and risks in order to make an informed decision.

In addition to pregnancy wantedness, exposure to domestic violence also has been indicated as a risk factor for substance abuse among women. In a study conducted by Martin, Kilgallen, Dee, Dawson, and Cambell (1998), 42% of women ($n = 84$) enrolled in a prenatal care/substance abuse program had experienced both physical and sexual violence, while 30% had experienced physical violence alone. The combination of both physical and sexual violence was significantly less among African American versus White women. Nevertheless, all victims experienced increased rates of depression, hostility, anxiety, interpersonal sensitivity, and somatization. Although no differences were found in patterns of substance abuse among victims and non-victims, those with co-

occurring trauma, experienced increased psychological distress and thus greater vulnerability to substance abuse in order to numb or manage PTSD related symptoms.

In a similar study, Velez et al. (2006), found that rates of lifetime abuse among participants ($N = 715$) in a multidisciplinary perinatal substance abuse treatment program ranged from 72.7% for physical abuse to 71.3% for emotional abuse to 44.5% for sexual abuse. Moreover, this pattern of abuse continued into pregnancy with 40.9% experiencing emotional abuse, 20% experiencing physical abuse, and 7.1% experiencing sexual abuse. Due to the psychosocial sequelae experienced by these women, the authors recommend routine screening for violence exposure among this high-risk population and co-occurring treatment for such trauma.

Another risk factor unique to women includes prenatal and post-partum depression, which are strongly correlated with maternal substance abuse (Bendell, 2004; O'Hara, 1986). From a biological standpoint, depression is associated with low levels of serotonin and dopamine, creating greater vulnerability to substance use, which acts on these neurotransmitter systems (Field et al., 2004). Additionally, depressed women are at greater risk of physical illness. Among a sample of depressed ($n = 110$) and non-depressed mothers ($n = 104$), for example, Field et al. (2007) found that depressed women used more substances including cigarettes, caffeine, and medications (primarily antibiotics). The increased use of antibiotics among depressed women was thought to be associated with increased cortisol levels, which kill immune cells.

Over time, such immunological consequences may lead to premature death for pregnant and substance abusing mothers. Such consequences can be seen in the longitudinal study conducted by Berg et al. (2008). Among low-income, high-risk,

mostly African American women ($N = 570$) recruited from an urban public hospital, Berg et al. found that women who drank throughout their pregnancy ($n = 264$) had a significantly higher rate of mortality ($\chi^2 = 12.1$, $df = 2$, $p < .01$) than those who abstained from alcohol use ($n = 196$) and those who drank early in their pregnancy but stopped by the second trimester ($n = 110$). At follow-up, 12.7% of the first trimester alcohol users and 12.5% of the continued alcohol use group had died, compared with 3.5% of the control group.

Understanding Maternal Addiction

Brickman et al. (1982) identified four distinct ideological models of helping and coping according to how one attributes responsibility for causing the problem and for solving it. Although these models are used to describe different ideologies regarding substance abuse recovery in general, the following section will review the moral, enlightenment, compensatory, and medical models as they pertain to pregnant, post-partum, and parenting women. Additionally, the biopsychosocial model will be discussed as an expansion of the medical model.

In the moral model, pregnant, post-partum, and parenting women are held responsible for both the problem of substance abuse and its solution (Brickman et al., 1982). From this perspective, human nature is viewed as strong, but these women are seen as having weak character, and their illicit drug is viewed as morally wrong. Recovery, according to the moral model, is achieved through proper motivation and enhanced striving. If the recovering mother fails to achieve sobriety or relapses, fault is ascribed to her as being lazy, lacking in will power, or not trying hard enough. Recovery is viewed as a personal choice, though such choice is more available to privileged

populations who have access to resources and incentives for achieving sobriety. As such, the moral model may serve to further oppress marginalized and vulnerable populations, such as pregnant, post-partum, and parenting women (Brickman et al., 1982). This blaming can lead women to conceal their problem and to avoid seeking help out of shame, stigma, and guilt (Koski-Jännes, Hirschovits-Gerz, & Pennonen, 2012). Although research does not support the moral model of addiction treatment, society in general still largely blames pregnant, post-partum, and parenting women for creating and solving the problem of addiction (Brady & Ashley, 2005). Helping, within this framework, is limited to exhortation to change by others, such as in self-help groups.

In the enlightenment model, also referred to as the spiritual model, pregnant, post-partum, and parenting women are thought to be the cause of their substance use problems but are not believed to be responsible for solving them (Brickman et al., 1982). In this model, human nature is viewed as bad and the addicted women must be enlightened as to the true nature of their condition and the course of action required to deal with it. Relapse may be seen in this model as a spiritual failing. Recovery occurs by deferring control to an external and authoritative source, such as God, a spiritual community, or other change agent. The risk of this model lies in the deferral of personal agency for change. Surrendering to a Higher Power, admitting powerlessness over addiction, and committing to a spiritual program of change, however, are core elements of Twelve-Step Programs (TSP) including Alcoholics Anonymous (AA) and Narcotics Anonymous (NA), which have been successful in helping countless addicted individuals achieve self-discipline and maintain sobriety. Although sobriety may be achieved, women may obsessively focus on problems or reorganize their lives around the behaviors or

relationships intended to help them deal with the addiction (Brickman et al., 1982), thus perpetuating the addictive process of addiction without the substance use.

The compensatory model absolves women from the blame and guilt associated with the moral model, recognizes the environmental and social contributors to addiction, and holds women responsible for solving their own problems (Brickman et al., 1982; Koski-Jännes et al., 2012). From this perspective, human nature is viewed as good and addicted mothers are seen as deprived or suffering due to deficits in the environment. In this model, helpers mobilize resources and treatment to empower women to overcome obstacles and engage in recovery. This model taken to the extreme may lead to a paranoid, controlling, or negative orientation toward life, as the mothers must constantly solve problems they did not create, which is a form of oppression. Such stress may increase risk for relapse, which is viewed as a mistake, error, or temporary setback (Brickman et al., 1982).

In the medical model, individuals are not held responsible for the cause of their problems or their solution (Brickman et al., 1982). From this perspective, human nature is viewed as weak, and pregnant, post-partum, and parenting women are seen as having the disease of addiction, which is beyond their control. Recovery is achieved through expert help, though the individual is expected to participate in and follow prescribed treatment. Relapse, according to the medical model, is viewed as a reactivation of a progressive disease. While the medical model removes stigma associated with addiction and its treatment, it can foster dependency on professionals and contribute to a lack of initiative or agency in recovery (Brickman et al., 1982). Additionally, because of its focus on biological and genetic factors, this model fails to adequately address common

process factors among all addictions (e.g., sexual addiction, shopping, gambling). Finally, the medical model fails to address spontaneous recovery or the success of non-medical model treatment approaches. Nevertheless, the medical/disease model, in conjunction with TSPs, represents the dominant approach for treating chemical dependency in the United States (Marlatt, Baer, Donovan, & Kivlahan, 1988). Modernization of the medical model, however, recognizes the biopsychosocial nature of addiction and recovery.

Engel (1977) proposed moving away from the reductionistic and deterministic biomedical model of disease toward an integration of biological, psychological, and social domains into the understanding the etiology and treatment of disease. In such a model, both illness and problems of living can be addressed holistically from a conceptual framework of systems theory, which holds that all levels of organization are interconnected, with a change in one system impacting changes in other systems. For the treatment population in this study, the practitioner operating according to a biopscyhosocial framework would serve not only as a substance abuse expert, but also as a clinician, educator, and participant-observer engaged in a collaborative relationship with the woman in order to understand her experience of addiction (Engel, 1996). Within this conceptual framework, the woman's narrative about her illness experience becomes a valid source of data. Thus, the biopsychosocial model integrates distinctly human capacities of relationship, communication, observation, introspection, and dialogue in the service of healing.

In terms of addiction, the biopsychosocial model takes into account the interaction between complex mental, social, and physical aspects of health. Biological determinants

of addiction, for instance, include the following: (a) molecular factors (e.g., neurotransmitter systems, neuronal pathways, and hormones); (b) genetic and heritability factors; (c) physical conditions (e.g., medical illness, neurological disorders, and other disease and non-disease states such as pregnancy); and (d) substances, including prescription, over-the-counter, and illicit drugs (Samenow, 2010). Samenow (2010) suggested that the psychological determinants of addictive behavior may include the following: (a) dysphoric states such depression or anxiety, (b) disruptions to early attachment leading to insecure, avoidant, disorganized, or preoccupied attachment styles in adulthood, (c) difficulty with affective regulation, (d) trauma, and (e) experiences of shame or pervasive cognitive distortions. Social determinants, according to Samenow, include unique social, cultural, and spiritual factors that contribute to the development of addiction, such as experiences of poverty, unemployment, and sociocultural oppression and disenfranchisement.

Given the role of spirituality in modulating experience with a range of biopsychosocial illnesses, a number of researchers have called for the addition of a spiritual component to the biopsychosocial model (e.g., McKee & Chappel, 1992; Sulmasy, 2002). The specific role of spirituality as a resource for combatting addiction will be discussed at length later in this literature review. The biopsychosocial model, with the addition of the spiritual component, lays the theoretical groundwork for providing comprehensive and holistic substance abuse treatment, yet often such treatment is not available especially for pregnant, post-partum, and pregnant women (Brady & Ashley, 2005).

Attrition and Retention of Women in Substance Abuse Treatment

The complex nature of maternal substance abuse presents unique challenges and opportunities for engaging and retaining women in effective treatment and aftercare (Chablani & Spinney, 2011; Grella, 1999; Robles, Flaherty, & Day, 1994). Despite the deleterious effects of addiction on maternal and fetal health, however, women experience many barriers to engaging and persisting in treatment (Kelly, Blacksin, & Mason, 2001; Scott-Lennox, Rose, Bohlig, & Lennox, 2000). The literature related to attrition and retention of substance abusing pregnant, post-partum, and parenting women as well as related systemic and multicultural considerations were reviewed in order to inform this study.

Predicting attrition. Early attrition from treatment is linked with poorer maternal and fetal health outcomes (Kissin, Svikis, Moylan, Haug, & Stitzer, 2004). Despite such harmful consequences, pregnant women are at high risk of attrition from substance abuse treatment (Grella, 1999). According to research conducted by Bell, Cramer-Benjamin, and Anastas (1997) the following are predictors of early attrition among this population: (a) past or current involvement with Child Protective Services, (b) being self-referred versus court-ordered to treatment, and (c) being older. More recently, Haller, Miles, & Dawson (2003), found that women enrolled in a perinatal addiction day treatment program were more likely to accept and complete treatment if their legal status (i.e., probation, parole, or pending court date) required or incentivized them to do so (e.g., by forgiving jail time). Although such external motivators for engagement in treatment improve rates of attrition, these studies do little to suggest factors within the control of treatment programs that may contribute to or mitigate attrition.

In order to address this gap in the research, Kissin et al. (2004) conducted a study of 152 predominantly African American pregnant substance abusers enrolled in a comprehensive treatment program for pregnant women. Of those enrolled in the initial residential component, which provided detoxification and medical stabilization services, 19% (n = 29) of patients left against medical advice (AMA), with the most attrition occurring between day 2 and 5. Kissin et al. identified the following patient characteristics predicting early attrition: (a) receiving abstinence-based therapy versus methadone maintenance treatment (MMT; B = 3.60, p = .001); (b) being Caucasian (B = 3.14, p = .01); (c) reported history of family, social, and psychiatric problems (B = 2.79, p = .01); (d) more lifetime drug treatment episodes (B = .89, p = .001); and, (e) fewer drug (B = -2.44, p = .01) and medical problems (B = -1.94, p = .05). Age, education, employment status, and legal problems did not significantly contribute to the model. These results are consistent with those documented by Haller et al. (2003) indicating that women with greater drug severity (especially the use of crack cocaine), acute psychosocial and emotional distress, and Axis II psychopathology were associated with enrollment and persistence in treatment while less problem severity was linked with attrition.

Qualitative data and patient self-reports in the Kissin et al. (2004) study indicated that AMA patients were more likely to mention wanting to leave and were rated by nurses as having greater withdrawal symptoms ($t_{(146)}$ = -5.28, p < .001) and more cravings ($t_{(146)}$ = -2.54, p < .05). In contrast to completers, AMA patients had twice as many interactions with staff, felt less confident about staying in treatment and less hopeful about their recovery, felt they did not fit in very well, and complained more about

emotional distress. Although this study has limitations given the modest sample size and lack of measures to ensure inter-rater reliability among nurses, it highlights important considerations for maintaining pregnant women in treatment for substance abuse.

Retention strategies. Based on the results of the Kissin et al. (2004) and previous studies investigating attrition among pregnant, post-partum, and parenting substance abusing women (e.g., Grella, 1999), clinicians and treatment programs can take concrete steps to increase patient engagement. Given that those most at risk for attrition in Kissin et al.'s study were women eligible for but not receiving MMT, the authors recommend that programs monitor and address patients' withdrawal symptoms, especially among opioid dependent patients receiving abstinence-only treatment. Providing MMT to these patients may act as a harm-reduction intervention for a vulnerable population who may not seek treatment outside of pregnancy.

Similar to patient reports in the Kissin et al. (2004), studies examining predictors of retention among substance abusing women suggest the importance of client-program fit. Women treated in gender-specific versus mixed-gender programs, for instance, have longer lengths of stay and completion (Grella, 1999), higher rates of long-term abstinence (Grella, Joshi, & Hser, 2000), and improved employment and relational outcomes (Dahlgren & Willander, 1989). Programs that recognize and accommodate the unique needs of pregnant, post-partum, and parenting women, such as allowing children to stay with their mothers during treatment and/or admitting women during pregnancy, are associated with higher rates of retention in and completion of treatment (Grella et al., 2000).

Robles et al. (1994) described efforts to maintain "resistant" women (*n* = 88) in a five-phase longitudinal study on the effects of prenatal substance abuse on pregnancy and infant outcomes. Women identified as resistant were reluctant to participate in the study (but did not refuse to do so), missed appointments, did not return phone calls to researchers, or did not engage in follow-up appointments for their infants. They were more likely than non-resistant participants to have low self-esteem, higher levels of depression and anxiety, significantly higher levels of stress or life events, and lower social support. By implementing a structured procedure of retention, however, the researchers were able to maintain twice as many women in the study. Such procedures may be effective for programs providing outpatient treatment and aftercare for post-natal substance abusing women.

First, Robles et al. (1994) established daytime and evening phone contact with resistant subjects in order to establish rapport. When phone contact was not possible, a form letter was sent. If there was no response to telephone or letter contact, the researchers made home visits. Accommodations were made for in-home assessment of the mother and infant if she was unable to come to the office. As such, paid transportation to the office was provided or arrangements were made to conduct the five-phase assessment in the home, day care centers, a caregiver's home, or other convenient location. Childcare arrangements for siblings were provided when necessary. In addition to ensuring that women knew that they were sharing something of value, the researchers provided tangible incentives (e.g., a holiday gift for child, $5.00). Finally, the researchers demonstrated a concern for the problems impacting the participant and her family, followed up about such problems, and supported the participant in coordinating adjunct

care as needed. The protocol used to maintain women in the study represents a realistic portrait of the barriers impacting substance-abusing women and suggests successful efforts to mitigate attrition, which could be translated to outpatient and aftercare programs for pregnant, postpartum, and parenting women in recovery.

Like the Robles et al. (1994) study, Chablani & Spinney (2011) implemented engagement strategies based on relentless outreach, transformational relationships, and programming based on Prochaska and DiClemente's (1983) stages of change model in order to retain 81 very high-risk pregnant teenagers in treatment. Relentless outreach involved numerous and consistent attempts to connect, reconnect, and engage the young women in treatment, recognizing that this would take time given their mistrust of treatment providers. Transformational relationships were built incrementally and intentionally by first establishing trust, evidenced in reliable, consistent, predictable, and supportive contact. Next, the focus moved toward deepening, sustaining, and leveraging the relationship to promote change and begin identifying and dealing with risky and/or harmful behaviors while continuing relentless outreach. Finally, stage-based programing was used to assess participant's readiness for engaging in positive relationships, to promote worker's use of self according to where the participants were, and to develop appropriate programming to move participants toward the next stage of change.

The young mothers in Chablani and Spinney's (2011) study were gang and court involved, in danger of dropping out of school or had already dropped out, involved in domestic violence situations, were isolated immigrants or refugees, and had co-occurring substance abuse and mental health issues. Despite these significant barriers, participant retention was 90%. Thus, these high risk young women were able to participate in

programming to reduce repeat pregnancies (80% got on long-term birth control), increase

parenting skills, decrease child abuse and neglect, and increase positive outcomes for the

mother. Such results suggest the importance of relationship oriented, outreach driven,

and motivational programming in order to encourage women's readiness for change.

Despite successful outreach and retention efforts, systemic and cultural barriers continue

to present a significant challenge for pregnant, post-partum, and parenting women

needing substance abuse treatment.

Multicultural Considerations: Confronting Barriers to Treatment

Gender. Women face many barriers to substance abuse treatment and are

estimated to drop out at a rate of 60% (Kelly et al., 2001; Scott-Lennox et al., 2000).

Men, on the other hand, are 10 times more likely to enter treatment, with trends toward

longer lengths of stay and greater rates of completion (Blume, 1990). Both gender-blind

treatment and gender bias have contributed to this disparity.

Despite evidence suggesting that paternal substance use directly and negatively

impacts fetal development and the mother's likelihood to use substances, "men have been

spared the retribution aimed at women" (Daniels, 1997, p. 579), emphasizing the cultural

message that the fault lies with the mother. This attitudinal bias is also reflected in the

plethora of research related to the fetal effects of maternal substance abuse and the

paucity of research related to fetal effects of paternal substance abuse (Babcock, 2008).

Babcock (2008) cited well-documented evidence of the deleterious impact of paternal

alcohol, tobacco, marijuana, cocaine, and opiate use on fetal development. Such

knowledge, however, is not part of public health campaigns, which continue to

exclusively target women.

In addition to attitudinal gender bias, substance abuse treatment has historically been provided on a male model of care based on the Jellinek Curve of Alcoholism, developed out of the Jellinek studies conducted with male alcoholics (Baird, 2008). Under this model, treatment was often provided to female clients in mixed-gender settings by male program staff who employed a confrontational therapeutic style and directed them into gender stereotyped tasks and training with little opportunity for sustainable compensation (Chavkin, 1990). Furthermore, male models of care failed to address the environments of violence and sexual exploitation women experienced, ignored their childcare needs, and did not offer appropriate obstetric/gynecological care, thus limiting or precluding women's participation in treatment.

In contrast to gender blind treatment, gender-specific programs and gender-sensitive approaches to treatment are needed in order to mitigate high dropout rates among women seeking support for substance abuse (Baird, 2008; Brady & Ashley, 2005). Such approaches recognize the unique role women play as mothers and caregivers. Gender-sensitive considerations for treating pregnant and substance abusing mothers were highlighted in a comprehensive review of the literature conducted by Ashley, Marsden, and Brady (2003). In this study six factors emerged as essential components for treatment completion in comprehensive substance abuse treatment programs for pregnant and substance abusing mothers. These factors included the following: (1) child care, (2) prenatal care, (3) women's only admissions, (4) supplemental services and workshops to address women specific issues, (5) mental health programming, and (6) comprehensive programming (i.e., education, employment skills, housing).

By integrating comprehensive and gender-specific measures into substance abuse treatment for women, providers can mitigate gender biased programming and reduce barriers to treatment for this vulnerable population. Furthermore, gender sensitive programming is related to improved parent-child relations; decreased abuse and neglect; improved parenting skills; healthier women, infants, and children; and increased likelihood of the family remaining intact (Baird, 2008; Kalling-Knight, Logan, & Simpson, 2001). Women who attend comprehensive gender-specific residential substance abuse treatment of six months or longer with their children, in fact, are more likely to complete treatment, to regain and maintain custody of children, and to be abstinent at 6 months post-discharge (Ashley et al., 2003; Kalling-Knight et al., 2001).

Despite the measurable benefits of gender-specific and gender-sensitive substance abuse treatment for women, many drug treatment programs will not accept pregnant women due to their special needs and a fear of liability (Chavkin, 1990). Further restrictions apply based on method of payment, number and age of children, and specific substance of abuse. For pregnant and parenting poor women with Medicaid or no insurance, comprehensive substance abuse treatment options are very limited. Based on NSUDH data, Brady and Ashley (2005) found that while 37% of treatment programs offered special programs for women, 13% offered childcare, and 12% offered prenatal services, only 6% of all substance abuse treatment facilities served women only. The 6% of gender-specific programs for women, however, were more likely to offer prenatal and childcare and to provide transportation and special programs for women. As a result, these facilities enrolled more women in treatment.

Race and ethnicity. In addition to differences in treatment utilization based on gender, disparities also exist along the lines of race and ethnicity. Low income women and women of color, for instance, face increased barriers to accessing adequate healthcare due to culture, language, inaccessible service locations, complex paperwork and bureaucracy, and limited financial resources (Burger, 2010; U.S. DHHS; 2000). These barriers impact access to substance abuse and mental health treatment as well as to adequate prenatal care, with disadvantaged populations experiencing more pregnancy complications and lower birth weight babies.

In response to systemic barriers to adequate prenatal care and substance abuse services for pregnant women, Haller et al. (2003) suggest imbedding perinatal addiction services in prenatal clinics in order to increase access to substance abuse services and utilization of necessary obstetric care. This approach has met with success, according to Svikis et al. (1998) whose study revealed that substance abusing pregnant women who attended on-site support groups in their obstetric clinics averaged significantly more prenatal appointments (8.7 vs. 6.8) than pregnant substance abusers who did not attend the groups. Additionally, group attendees were less likely to have low birth weight babies.

When pregnant women do access prenatal care, however, there is evidence of bias in screening for substance abuse issues (Haller et al, 2003; Kissin et al., 2004). Caucasian women, for instance, are more at risk for abusing substances during pregnancy and leaving treatment AMA (Kissin et al., 2004). African American women, however, continue to be more frequently screened and diagnosed for substance use disorders and, as a result, are overrepresented in perinatal addiction programs and in research (Brady &

Ashley, 2005; Haller et al., 2003).

Shame, stigma, and fear. For pregnant, post-partum, and parenting women, bias

occurs at the intersection of gender, race, and motherhood contributing to stigma and

shame that may minimize treatment during pregnancy. Addicted mothers are often

portrayed as

> poor, primarily Black, hedonistic villains, whose maternal instincts have been
>
> destroyed by the effects of their substance abuse, and who, consequently are
>
> unworthy of retaining custody of their children. (Garcia, 1993, p. 1332)

Such stereotypes and cultural blame are evident in the disproportionate arrests and

criminal punishment of addicted mothers, especially women of color, who unlike fathers

may be arrested not only for criminal offenses but also for child abuse (e.g., delivering

controlled substances to a minor through the umbilical cord) related to their drug use

(Chavkin, 1990; Coleman et al., 2005; Leib & Sterk-Elifson, 1995).

Allegations of abuse and neglect related to maternal substance use are often

triggered by positive neonatal toxicology screens and may lead to threats of custody loss

or mandated treatment with interruptions of maternal custody (Chavkin, 1990). Due to

constrained systems, CPS investigations are often prolonged and appropriate resources

for treatment may not be available. As a result, infant children often are placed out of the

care of their mothers, disrupting crucial bonding and potentially disrupting attachment

patterns, which are linked with negative and long-term physical and mental health

sequelae (Felitti et al., 1998).

Fear of such consequences contributes to under-reporting of substance abuse and

decreased contact with prenatal care, thus increasing the risk for negative pregnancy

outcomes (Coleman et al., 2005; DeVille & Kopelman, 1998; Garcia, 1997).
Unfortunately, such bias is too often echoed in general substance abuse treatment
facilities, thus increasing stigmatization (Baird, 2008). In the words of Colten (1982)

> the general premise of treatment programs is that addicted women are bad
> mothers….If addicted mother are treated as if they are inept, guilty, and
> irresponsible, then they are likely to tend to feel, and possibly behave that way. It
> is hard to be a good or even a "normal" or average mother when those around you
> doubt your competence. (pp. 89-90)

Social programs, in fact, have been developed to dissuade, coerce, or limit
substance abusing women's reproductive options due to the high correlation between
maternal substance abuse and child maltreatment (Yancey, 2005). Through these
programs, which seek to eliminate the birth of substance-affected children, women may
be financially compensated for sterilization procedures such as tubal ligations or long-
term birth control measures such as implanting intrauterine devices. Such methods of
control, however, ignore both the social conditions contributing to substance abuse and
the healing potential of recovery.

Instead of moral model measures, Baird (2008) cited improved outcomes related
to collaborative relationships among treatment recipients, treatment providers, and other
agencies involved such as CPS workers, probation or parole officers, and medical
providers. Chavkin (1990) specifically recommends a team-based approach involving
the physician/midwife, drug treatment experts, neonatologist, and social workers who,
together, collaborate with the individual to develop and monitor a comprehensive
treatment plan. Additionally, at a macro-level, Chavkin recommends advocacy efforts to

allocate funds away from ineffective law enforcement efforts that criminalize maternal

substance abuse toward the rapid development of comprehensive systems of care and

integrated programming to meet the multidimensional needs of pregnant and substance

abusing women. Although such efforts will be costly, Chavkin states

> the costs in social disruption are immeasurable if we construct a wedge between
>
> pregnant women and fetus; between woman and doctor; and if we compound the
>
> in-utero drug exposure of these infants by a childhood of the emotional
>
> deprivation associated with institutional guardianship. We cannot afford it. (p.
>
> 486)

For pregnant, post-partum, and parenting women, recovery presents a path that

supports women's autonomy and dignity while addressing substance-related behaviors

that contribute to negative child outcomes such as child abuse and neglect (Ammerman,

Kolko, Kirisci, Blackson, & Dawes, 1999). According to Ammerman et al. (1999),

women in recovery move from single-minded preoccupation with obtaining drugs to

increased sensitivity to children's needs and the ability to more consistently meet those

needs. Additionally, following detoxification, women's withdrawal related anger

subsides. Through recovery, women learn distress tolerance and impulse control skills

that reduce the risk of abuse. As recovery continues and environmental changes are

made, children's exposure to substance using people and unsafe environments decreases.

Financial resources spent on alcohol and/or drugs may be diverted to meet children's

basic needs. When trauma is addressed in recovery, emotional numbing subsides and

women demonstrate an increased capacity for nurturing and problem-solving.

Research Site

In alignment with evidenced-based literature regarding substance abuse treatment for women, the research site for the proposed study provides gender-specific holistic and comprehensive substance abuse services to support recovery for pregnant, post-partum, and parenting women. Specifically, the site links women to transportation services, provides sober residential living options where young children are welcomed, assists with coordinating childcare, connects women to parent advocates, provides parenting classes, brings health care providers to the to treatment facility, and works collaboratively with those involved in the women's life. Additionally, the research site provides trauma-informed services and linkage to MMT, AA, and NA. The program allows women to remain in treatment for up to two years and provides educational, employment, life-skills training, and comprehensive substance abuse treatment during this time. The site also provides an optional after-care program that the women may utilize following their graduation from treatment.

Summary

In conclusion, the risk factors for maternal substance may include poverty, low socioeconomic status, educational level, and unemployment (e.g., SAMSHA, 2013); depression, low self-esteem, lack of support, and high stress (e.g., Jesse et al., 2006), family history and high risk living environments (e.g., Bendersky et al., 1996), marital status, ethnicity, and co-occurring psychopathology (Havens et al., 2009); physical and sexual violence and victimization (Martin et al., 1998; Velez et al., 2006), history of abortion (Coleman et al., 2005), and discrimination and biological vulnerability (Brady & Ashley, 2005). Despite evidence for biopsychosocial-spiritual contributors to substance

abuse, moral model measures and systemic bias continue to impact the perception and treatment of substance abusing women (Baird, 2008; Colten, 1982). Such measures contribute to low treatment utilization and high attrition among this population, negatively impacting maternal and fetal health (Daniels, 1997; Garcia, 1993; Leib & Sterk-Elifson, 1995).

By deconstructing and updating institutionally and socially imbedded attitudes, policies, and treatment practices, pregnant, post-partum, and parenting women may be more likely to access the substance abuse treatment they need and engage in long-term recovery efforts (Garcia, 1993; Yancey, 2005). In order to attend to the unique needs of this population, the literature recommends gender-specific, comprehensive treatment (Dahlgren & Willander, 1989; Grella, 1999; Grella et al., 2000). Such programs rely both on relationship and on research-supported interventions to interrupt cycles of shame and avoidance, provide gender-sensitive programming, and facilitate the holistic lifestyle changes needed for leading healthy and fulfilling lives (Grella et al., 2000; Robles et al., 1994). Recovery of this nature addresses the mother's own developmental trauma and may interrupt its transmission into the next generation (Fellitti et al., 1998; van der Kolk, 2005). The following section discusses existing frameworks for treating addiction and promoting recovery and introduces salutogenesis as a conceptual framework for the study.

Salutogenesis: A Conceptual Framework

In the United States, most substance abuse treatment models and addiction research are based on the disease model, which perceives the nature of addiction and recovery from a deficit or pathogenic framework. According to the American Society for

Addiction Medicine's (ASAM, 2010) definition, for instance, addiction is characterized as

> a primary, chronic disease of brain reward, motivation, memory and related
> circuitry. Dysfunction in these circuits leads to characteristic biological,
> psychological, social and spiritual manifestations. This is reflected in an
> individual pathologically pursuing reward and/or relief by substance use and other
> behaviors. (Short definition of addiction, para 1)

Within the disease model framework, cycles of relapse and remission are expected with progressively greater risks of disability and premature death unless there is intervention, treatment, and engagement in recovery activities (ASAM, 2010; NIDA, 2012).

SAMSHA (2011) defines recovery as "a process of change through which individuals improve their health and wellness, live a self-directed life, and strive to reach their full potential" (Working definition of recovery, para 2). SAMSHA suggests that recovery is supported by four dimensions: (1) health: overcoming/managing disease and leading a physically and emotionally healthy lifestyle; (2) home: a safe and stable place to live; (3) purpose: meaningful daily activities, and (4) community: relationships and social networks that provide support, friendship, love, and hope. According to SAMSHA, recovery: (a) emerges from hope and is based on respect, (b) is person-driven but is supported through relationships and social networks, including peers, allies, family, and community; (c) is holistic and occurs via many pathways; (d) is culturally based and influenced; and, (e) is supported by addressing trauma.

In contrast to pathogenesis, and consistent with the goals and principles of recovery, salutogenesis is concerned with identifying the origins of health and in

promoting optimal well-being (Becker, Glascoff, & Felts, 2010). Antonovsky's (1979, 1987) theoretical framework of salutogenesis conceptualizes health and wellness along a continuum (from optimal health to disease) rather than as dichotomous (sick/well). This framework considers humans as subject to entropy, degeneration, and disease (Becker et al., 2010). From this perspective, the goal is promoting health rather than treating disease. Substance abuse treatment conducted within a salutogenic framework would therefore consider the starting point as the health potential of addicted persons. Treatment would support addicted individuals in understanding existing experiences of health and their causes as well as their health potential in other areas. Furthermore, treatment would proactively encourage the development of health promoting factors and practices in order to increase the capacity and potential for physical, mental, social, and spiritual well-being. Recovery within this framework would be seen as a forward moving, continuous effort of self-improvement and optimization of potential.

Based on Antonovsky's salutogenesis and for the purposes of this study, addiction will be conceptualized as a biospsychosocial-spiritual condition that has progressed to a disease state on the salutogenic health/ease-illness/disease continuum. The role of treatment, then, is to move individuals from the disease state toward a state of biopsychosocial-spiritual health via recovery. From a salutogenic perspective recovery is promoted not by remediating pathogenic factors associated with disease but by intentionally developing and strengthening health-promoting factors shared by those who avoid or successfully combat addiction. The success of recovery, from this perspective, is not the absence of substance abuse but the presence of health and holistic wellbeing.

The following section will provide an overview of the salutogenic model, including a

brief history of its development.

The Salutogenic Model: Sense of Coherence

Antonovsky (1979), an American-Israeli medical sociologist, developed the

salutogenic theoretical framework after exploring a small though significant subset of

Israeli women in menopause who, despite life in concentration camps during the

Holocaust, were psychologically and emotionally healthy. His research revealed that the

women shared what he called a strong *Sense of Coherence* (SOC), which supported them

in managing extreme stress and staying well despite long-term exposure to unthinkable

horror. Specifically, they saw the world and life's challenges and stressors as

comprehensible or able to be understood. Additionally, they had access to resources for

coping, which made the stressors *manageable,* and they had motivation to cope due to a

sense of purpose or *meaning* in life. Based on these findings, Antonovsky (1987) defined

SOC as:

> a global orientation that expresses the extent to which one has a pervasive,
>
> enduring though dynamic feeling of confidence that (1) the stimuli deriving from
>
> one's internal and external environments in the course of living are structured,
>
> predictable and explicable; (2) the resources are available to one to meet the
>
> demands posed by these stimuli; and (3) these demands are challenges, worthy of
>
> investment and engagement. (p. 19)

SOC is thus a flexible orientation to life that supports successful coping through the

breadth of human challenges and stressors (Antonovsky, 1987). Those with such an

orientation view the world as making sense cognitively, emotionally, and instrumentally (Antonovsky, 1996).

Antonovsky (1987) developed the Sense of Coherence-Orientation to Life Questionnaire (SOC-OLQ) to measure the factors of meaning, manageability, and comprehensibility, which together comprise the construct of SOC. Despite recognition that the strength of one's SOC is influenced by social and cultural disparities, the construct itself is subjective with individuals defining what gives them meaning, who or what is considered a resource, and how much information is needed to comprehend. As such, the instrument has been used widely in cross-cultural health promotion and cross-disciplinary studies with normative data available for diverse populations (see Antonovsky, 1993).

SOC is not an intrinsic trait, but rather a result of the individual's interaction with the environment (Antonovsky, 1979, 1987). As such, SOC begins developing from birth and is influenced by the sociocultural and historical context to which one belongs, as well as one's place and role in society. Together these contribute to one's psychosocial and genetic-constitutional resources, which Antonovsky refers to as Generalized Resistance Resources (GRR) or salutary (health promoting) factors.

Antonovsky (1979, 1987) conceptualizes GRRs as characteristics of individuals, groups, subculture or society that act to avoid or combat stressors and promote a strong SOC. Examples of GRRs include factors such as education, living and work conditions, and social ties and support (Antonovsky, 1979, 1987). These salutary factors are negentropic in nature, meaning they actively promote health and order, in contrast to risk factors that are focused on identifying precursors to disorder (Antonovsky, 1996). GRRs

contribute to life experiences that are characterized by (a) consistency, (b) overload-underload balance (e.g., adequate level of challenge and responsibility), and (c) participation in socially valued decision-making (Antonovsky, 1987). Repeated experiences of this kind enhance SOC by contributing to a sense of meaning, manageability, and comprehensibility that lead one toward the health end of the continuum. Stress that violates SOC, on the other hand, will cause harm and lead to the disease end of the continuum. As such, SOC mediates the effects of GRRs into health (See Figure 2).
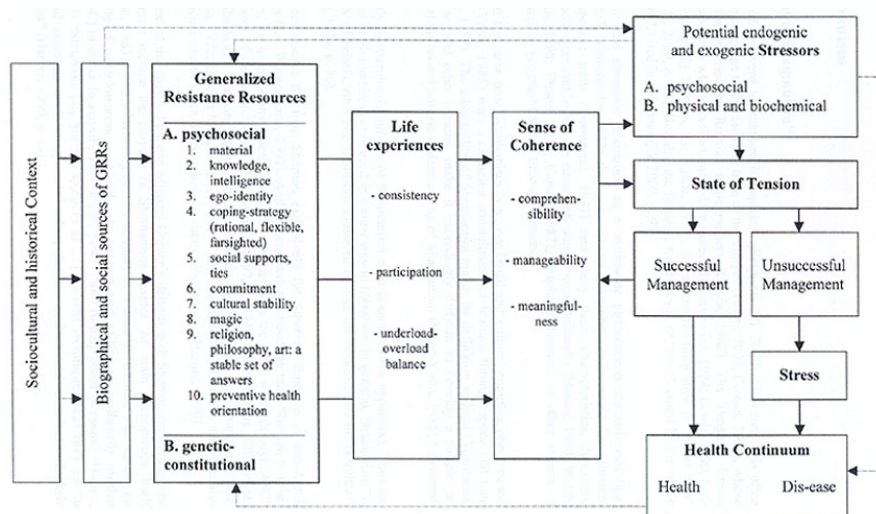
FIGURE 2: Antonovsky's salutogenic theoretical framework (Faltermaier, 2005, p. 66)

Although SOC is a salutogenic construct, much of the research conducted to date has utilized pathogenically oriented outcome measures. Initial findings in the longitudinal double blind Helsinki Heart Study (Poppius, Tenkanen, Hakama, Kalimo, & Pitkanen, 2003), for instance, suggested that workers with a high SOC had half the risk of all-cause mortality as those with low SOC. Although these results suggest that positive health characteristics lowered participants' risk for coronary heart disease (CHD), they fail to document greater positive health due to the pathogenic outcome measures used.

Despite this broad limitation in SOC research, exceptions do exist, with several studies

exploring salutogenic outcomes.

     In Nyamathi's (1991) study of 581 homeless or drug abusing minority women

considered at risk for HIV, for instance, SOC was positively correlated with the

resistance resources of self-esteem ($r = .63, p < .0001$) and support availability ($r = .14, p$

$= .01$) and negatively correlated with the outcome variables of emotional distress ($r = -$

$.63, p < .0001$), somatic complaints ($r = -.46, p < .001$), and high-risk behavior ($r = -.24,$

$p < .001$). Similarly, Antonovsky (1993) reported that SOC was significantly correlated

with internal locus of control ($r = .44$) and quality of life ($r = .76$) in a group of Sweedish

adults who had experienced high-risk childhoods (Dahlin, Cederblad, Antonovsky, &

Hagnell, 1990). Likewise, SOC was significantly correlated with the construct of

hardiness ($r = .50$) in a study with U.S. nurses (Williams, 1990). Because a strong SOC

tends to be positively correlated with salutogenic health outcomes and negatively

correlated with pathogenic health outcomes, it is important to explore the role of SOC in

addiction treatment.

SOC, Addiction, and Recovery

     From a salutogenic perspective, addiction can be viewed as a movement away

from health toward disease. Unlike the biomedical model, however, the salutogenic

model focuses on health promoting factors for recovery versus risk factors for disease.

Movement along the health-disease is influenced by sociocultural and historical variables,

such as poverty and discrimination, which interact with one's GRRs, SOC, and life

experiences to influence the management of tension. When an individual has few

salutary factors or resources for coping and a weak SOC he or she is at risk for

unsuccessful management of tension, the experience of stress, and movement toward a disease state, such as addiction. This debilitating cycle contributes to the progressive nature of addiction experienced by both the general substance abuse population and pregnant and post-partum substance abusing women in particular (Brady & Ashley, 2005; SAMHSA, 2013). Both populations face a number of barriers to successful recovery. Among these are high rates of attrition from treatment, risk of relapse, and higher rates of mortality than non-substance abusing populations (NIDA, 2012). Because SOC is such a strong predictor of where one falls along the health/disease continuum due to its role in effective tension management, it is important to explore this construct further as it relates to substance abuse outcomes.

The majority of the research examining SOC in addicted populations has been conducted outside of the U.S. using SOC as an independent variable to predict pathogenically oriented outcome measures. There is ongoing debate, however, over whether SOC is a stable trait or whether it can be strengthened through treatment or weakened through stressful or traumatic life events (Nilsson, Starrin, Simonsson, & Leppert, 2007). Antonovsky (1996) linked traumatic events (especially those from childhood) with weakened SOC. Furthermore, he encouraged research in which SOC is used as a dependent variable. Interestingly, few studies have examined whether SOC can be strengthened through intentional intervention. Given the role of SOC in predicting abstinence/relapse (Chen, 2006), survival/mortality (Fridell & Hesse, 2006), and attrition/retention (Andersen & Berg, 2001), this presents a significant gap in the literature, which this study seeks to address.

Empirical Literature

      Much research has linked the strength of SOC with patterns of drug abstinence and retention in treatment. Abramsohn, Peles, Potik, Schreiber, and Adelson (2009), for example, administered the SOC-29 scale to 90 heroin addicts (66 males, 24 females) at a methadone maintenance treatment (MMT) clinic in Tel Aviv, Israel. The scale was given at baseline and one year post-discharge to determine the stability of SOC over time and the difference in treatment retention and relapse rates according to the strength of SOC. Abramsohn et al. (2009) found no differences in SOC scores according to demographic factors; however, mean SOC scores were significantly lower in the 42 patients who were still abusing drugs at one-year follow-up versus those who were abstinent ($F = 9.4$, $df = 1$, $p = .003$). Similarly, retention was lowest among those patients with the lowest SOC scores at admission (<109) and highest among those with a strong SOC at admission (>130). The authors concluded that SOC is a stable parameter that can serve as a predictor for treatment retention and drug abstinence. A limitation of this study is that the authors measured the components of SOC separately, though theoretically Antonovsky conceptualized SOC as a single construct (Antonovsky, 1996).

      The results of the study conducted by Abramsohn et al. (2009) are consistent with previous research findings which suggest that a strong SOC is linked with increased treatment retention, lower relapse rates, and increased abstinence over time (e.g., Andersen & Berg, 2001; Berg, 1996; Chen, 2006; Feigin & Sapir, 2005). In a study examining natural recovery (i.e., no treatment) among Israeli prisoners, Chen (2006) found that compared with those in early recovery (< 6 months), inmates in sustained recovery (between 6 and 24 months) had a stronger SOC ($F_{(94)} = 8.13$, $df = 1$, $p < .01$).

Likewise, among a primarily male sample ($N = 168$), Feigin and Sapir (2005) found that

SOC levels approximated the norm among long-term abstinent Israelis (2-8 years, $n = 40$),

while those in short-term recovery (< 4 months, $n = 128$) had a significantly lower SOC

($c^2 = 24.77$, $df = 2$, $p < .001$). In fact, 70% of those with only short-term abstinence had a

low SOC. Given that SOC was the strongest predictor for successfully classifying

patients into long/short-term abstinence, Feigin and Sapir, recommended that clinicians

assess patient SOC levels at intake in order to predict treatment outcomes so that

intervention and treatment planning can be structured to strengthen weak SOC levels.

Although causality cannot be assumed, Chen (2006) suggested that success with

abstinence contributes to personal and emotional changes, strengthens one's sense of

meaning and resources for coping, and thus raises one's SOC. Feigin and Sapir (2005)

similarly suggested that SOC is a personality resource for addicted individuals in the

long-term process of recovery in that it promotes personal responsibility for recovery

(with or without support) and plays a central role in successful coping with stressful

stimuli. Such a view is consistent with the compensatory attribution model (Brickman et

al., 1982; Feigin & Sapir, 2005), which views drug and alcohol abuse as compensating

for a deficit in adequate resources for coping with environmental stressors.

SOC has important implications not only for treatment retention and abstinence

but also for survival. In a multi-site study conducted in Oslo, Norway, for example,

Andersen and Berg (2001) found that among their random sample of 60 patients in long-

term residential substance abuse treatment, low SOC was linked with increased mortality,

with 11.7% of the sample dead six years after admission. In contrast, a normal SOC was

linked with 100% survival at six-year follow-up ($c^2 = 34.3$, p $< .0001$). Additionally,

patients with a normal SOC had a 65% less chance of dropout during the first year (b = -1.04, Wald = 5.74, p < .0001). These results were consistent with Berg and Brevik's (1998) study in which treatment non-completers had a significantly lower SOC (M = 2.73, SE = 0.14) than those who completed treatment (M = 3.1, SE = 0.10, p = .04). Mortality, in this study too, was linked with a significantly lower SOC, with the patient with the lowest SOC dying of overdose (SOC = 1.69).

In a similar longitudinal study examining psychiatric severity and mortality among a sample of substance abusers (N = 125) admitted to a psychiatric detoxification and short-term rehabilitation unit in Sweeden, Fridell and Hesse (2006) found that at the five-year follow-up, 6% had died. By the 15-year follow-up, 24% of the initial population was dead. Surprisingly, time abstinent from substances was not significantly associated with mortality, though fewer patients died among those who had been abstinent for two years or more (12% vs. 28%). Instead, patients' global assessment of functioning (GAF) score, their global severity index (GSI) measuring psychiatric severity, and their SOC were significantly associated with mortality. Specifically, the meaningfulness component of SOC was associated with less risk of dying (b = -0.61, Wald = 7.9, p =.09), and there was a trend for the manageability scale (b = -0.42, Wald = 2.9, p =.005); however, no relationship existed between the comprehensibility scale and mortality (b = -0.24, Wald = 0.91, p = 0.34). In order to reduce lethality among addicted persons, Fridell and Hesse (2006) suggested that it is imperative to screen for psychiatric severity. Additionally the authors emphasized the need to treat co-occurring and persistent psychiatric symptoms while also strengthening patients' SOC with interventions aimed at increasing a sense of meaning in life.

Multicultural Considerations

Although SOC appears to be a stable predictor of substance abuse treatment outcomes regardless of demographic factors (Abramsohn et al., 2009), a number of studies have revealed differences in SOC as well as patterns of use according to gender (e.g., Andersen & Berg, 2001; Chen, 2009) and age (Graham, 1998; Neuner et al., 2006). These differences will be explored further in the following section. Recommendations for future research and intervention will be discussed.

Gender. The literature reveals that overall women may have lower SOC scores than men. In Andersen and Berg's (2001) study, for example, more women had a lower SOC at intake than men (83% vs. 61%). Despite a lower SOC, women had a 43% lower chance of dropping out of treatment during the first year and a lower mortality rate overall. The authors postulated that female patients' responsibility for children, in addition to the relationships formed during treatment, both among female patients and between female patients and treatment professionals, served as protective factors. Still, a high SOC emerged as the strongest predictor for treatment retention and survival. These results suggest both the need to structure treatment to account for difference in coping between men and women and the need to promote a strong SOC among all patients regardless of gender.

Likewise, in Chen's (2009) study, among a sample of 119 abstinent Israeli prisoners (65 males, 54 females), males had a significantly higher SOC ($F_{(1, 107)} = 10.18$, $p < .01$, $\eta^2 = .09$). Abstinence in females, in fact, was correlated with higher rates of trait anxiety, which increases vulnerability for relapse. The authors postulated that addiction served as a strategy for coping with the trauma of sexual abuse, which the majority of the

female prisoners had experienced. Thus, in order to strengthen the SOC among females and promote sustained abstinence, it is important to assess for and treat trauma, particularly sexual abuse.

These results were echoed in a study by Antonovsky, Hankin, and Stone (1987) examining patterns of alcohol use. The authors found that among their random sample of 276 men and women from a health clinic in a small development town in Israel, women in the study had a weaker SOC compared to men (56% vs. 43%, $c = 4.224$, $df = 1$, $p < .05$). Additionally, daily drinkers had a weak SOC (62%) when compared with weekly drinkers (54%) and non-drinkers (38%). This deficit left daily drinkers with a feeling of powerlessness, a lack of motivation and resources for coping, and a lack of social support. Additionally, women with a low SOC all reported physical health problems.

Although causality cannot be assumed, Antonovsky et al. (1987) postulated that feelings of powerlessness and a weak SOC might induce certain individuals to begin drinking alcohol as a means of coping because drinking is self-reinforcing in the beginning. Over time, however, heavy drinking leads to biological, social and psychological changes, which serve to weaken one's SOC. In addition to exploring gender differences in SOC, this study also took into account the role of socio-cultural factors that may contribute to a weak SOC (e.g., immigrant status, socialization of women in repressive cultures). Further research is needed, however, to better understand the role of culture and gender socialization on the development of one's SOC.

Age and problem behavior. SOC research has indicated important treatment considerations according to age and patterns of substance use. Nilsson et al. (2007), for example, interviewed 4,305 16 and 19 year old adolescents in Sweeden about their

drinking patterns and alcohol related problem behavior. After adjusting for ethnicity, residential type, family constellation, and parental employment, the authors found a significant relationship between SOC and alcohol-related problem behavior. Specifically, alcohol related trouble was between 42 and 56 times higher for those in the weaker SOC, more frequent drinking group, compared with the less frequent alcohol, stronger SOC group. Of note, however, is that those adolescents reporting a strong SOC and frequent intoxication did not report alcohol-related problem behavior. Based on these results, Nilsson et al. (2007) suggested that despite frequent intoxication, a strong SOC serves as a protective mechanism against engaging in problem behavior, perhaps due to better emotional regulation and capacity for self-reflection. Such results have important implications for alcohol education programs for young people. Promoting a strong SOC may, in fact, be more effective than focusing exclusively on safe drinking behavior and the deleterious effects of substance use.

Similar studies among older adults reveal a significant relationship between SOC and alcohol related patterns. A review of longitudinal SOC studies by Lindström and Ericksson (2005) suggested that SOC tends to increase with age over the lifespan; however, the strength of SOC is most influenced during the first two decades of life, with health implications throughout development. In a study of alcohol-related behavior among 952 older adult (age 60-66) members of a health maintenance organization, Midanik, Soghikian, Ransom, and Polen (1992) found a significant moderate negative correlation between SOC and alcohol problems ($r = -.19$, $p < .001$). SOC scores were significantly higher, however, for a subsample of lighter drinkers ($n = 419$) compared to a subsample of heavier drinkers ($n = 107$) who reported being drunk at least once in the

past year and who experienced at least one alcohol related problem.

Likewise, in their study of inner city university hospital sample of 1,833 patients, Neuner et al. (2006) found that lower SOC quartiles were associated with significantly higher prevalence of hazardous alcohol consumption, illicit drug use, and smoking. Older patients, however, had significantly higher SOC levels ($p = .014$), suggesting age as a protective factor against hazardous substance use. Despite such trends, older age presents important treatment considerations.

Graham (1998), for example, examined patterns of drinking and SOC among a cohort of older Caucasian adults (age 65+, $N = 865$) living in a small Eastern Ontario community in Canada. Compared with lifetime abstainers, lifetime infrequent drinkers, infrequent current drinkers, and current frequent drinkers, Graham found that former drinkers had the highest rates of depression ($F_{(4, 816)} = 9.7$ $p < .001$) and the lowest SOC ($F_{(4, 809)} = 6.8$, $p < .001$). There were no significant differences in depression or SOC among the other four groups. Although two-thirds of the sample was female, an analysis of covariance controlling for age and sex did not change overall findings. Given the results of this study Graham suggested the need for ongoing treatment of former drinkers, especially as they enter into older age where health problems, retirement, and bereavement may tax coping skills. Additionally, this study highlighted the need to consider abstainers as a heterogeneous group with differing treatment needs.

The results of the adolescent and older adult studies on SOC and patterns of drinking were consistent with a more recent nationally representative survey of 4,630 current drinkers conducted by Midanik and Zabkiewicz (2009). Results indicated that a strong SOC was linked to not reporting either alcohol related consequences or alcohol

dependence. Specifically, the odds of a current drinker experiencing no alcohol related problems was 2.3 times greater for those with a moderate SOC and 4.3 times greater for those with a high SOC, compared with those with a low SOC. Based on these results, Midanik et al. (1992) and Midanik and Zakiewicz (2009) suggested the need for further salutogenic research to assess and promote factors related to responsible drinking and healthy or adaptive responses to natural and predictable stressors rather than focusing research, money, and programming on pathogenic responses and outcomes. Such studies, however, would need to take into account the needs of special populations based on age and gender.

Summary

A strong SOC is linked with treatment retention (Abramsohn et al., 2009; Andersen & Berg, 2001; Berg & Brevik, 1998), abstinence (Abramsohn et al., 2009; Chen, 2006; Feigin & Sapir, 2005), and survival (Andersen & Berg, 2001; Berg & Brevik, 1998; Fridell & Hesse, 2006). Additionally, stronger SOC levels are associated with more responsible alcohol use and appear to mitigate alcohol related problem behavior (Midanik et al., 1992; Midanik & Zabkiewicz; 2009; Neuner et al., 2006; Nilsson et al., 2007). As such, SOC should be used as a dependent variable in future studies (Antonovsky, 1996; Fegnin & Sapir, 2005). Additionally, specific treatment needs related to gender (Andersen & Berg, 2001; Antonovsky et al., 1987; Chen, 2009) and age (Graham, 1998; Midanik et al., 1992; Neuner et al., 2006; Nilsson et al., 2007), should be considered in future SOC research and intervention. Furthermore the review of empirical SOC literature reveals an absence of studies examining SOC among pregnant, post-

partum, and parenting women in recovery from substance abuse. The current study seeks to address this gap in the research.

Given the role of a strong SOC in promoting positive treatment outcomes and in protecting against the deleterious effects of substance use, factors significantly contributing to the central meaning component of SOC warrant further attention (Fridell & Hesse, 2006). Research suggests that one of the most important factors in both avoiding addiction and promoting successful recovery is spirituality (Miller, 1998). From a salutogenic perspective, spirituality may strengthen SOC by contributing to a sense of meaning (Antonovsky, 1979, 1987; Unterrainer, Ladenhauf, Moazedi, Wallner-Liebmann, & Fink, 2010; Unterrainer, Ladenhauf, Wallner-Liebmann, & Fink, 2011). For these reasons, in addition to SOC, spirituality serves as a dependent variable in this study. The following section provides a review of the related theoretical and empirical literature related to spirituality and its roll in recovery.

<center>Spirituality</center>

There is no one agreed upon definition of spirituality. The term, though, is derived from the Latin word *spiritus*, meaning breath or the vital, animating part of the person (Piles, 1990). Spirituality exists beyond the defined boundaries, beliefs, practices, governance, and rituals associated with religious faith (Miller, 1998). The *Handbook of Religion and Health* (Koenig, McCullough, & Larson, 2001) conceives religion as an organized system of beliefs and practices intended to mediate an individual's relationship to the transcendent and to the community while spirituality is defined by a more personal and less formal search for meaning and relationship to the sacred. These constructs are conceptually distinct but may be overlapping for many individuals. The Fetzer Institute

(1999) makes the following clarifying statement, which has been useful in past social and medical research:

> Religiousness has specific behavioral, social, doctrinal, and denominational characteristics because it involves a system of worship and doctrine that is shared within a group. Spirituality is concerned with the transcendent, addressing ultimate questions about life's meaning, with the assumption that there is more to life than what we see or fully understand. Spirituality can call us beyond self to concern and compassion for others. While religions aim to foster and nourish the spiritual life—and spirituality is often a salient aspect of religious participation— it is possible to adopt the outward forms of religious worship and doctrine without having a strong relationship to the transcendent. (p. 2)

Miller (1998) suggests that in terms of research, spirituality should be considered a multi-dimensional latent construct, such as happiness or health, characterized by overt behavior, belief, and experience. One's spirituality then, may be understood as a set of religious or spiritual practices centered on a personal belief system (such as the interrelatedness of life, life beyond material existence etc.) and experienced through mystical or convictional contact with the transcendent or through feelings of oneness and serenity.

These conceptualizations of spirituality are supported by Otto's (1950) theory on numinous experience, which is defined as a complex state of feeling incomplete, of longing to reach a higher power, and of seeking existential meaning. Numinous experiences challenge ideas of separateness through communion with the holy, or *wholly* other. Through contact with the divine, the sacred, or the holy, one is able to transcend egotism and experience personal wholeness. Such an experience occurs outside of

moral/ethical values and individual belief systems and may result in self-empowerment and the ability to cope with stressful situations (Baldacchino & Draper, 2001). Given the strong association between spiritual experience and positive health outcomes, the role of spirituality as a buffer for stress and a resource for coping will be further examined in the following sections.

In the face of stressors such as life-threatening illness or addiction, individuals often experience a loss of control and a sense of personal nothingness (Antonovsky et al., 1987). Spiritual coping, however, allows individuals to reach beyond the self to a higher power to gain control over their life process, to find meaning, and to achieve a sense of wholeness (Otto, 1950). Through a relationship with God or a connection to the natural world, for instance, one may transcend the self and reach a higher power or experience a sense of meaning or deep peace. Such an orientation to life serves as an empowering resource for navigating life's demands. Consistent with prior research, Underwood and Teresi (2002) suggest that the feelings of comfort, joy, and connection associated with DSEs are health promoting and should be intentionally fostered (e.g., by hiking or making art) in order to positively influence health and well-being. By bolstering spiritual resources, individuals may be better equipped to meet life's demands.

In their stress-coping theory, Folkman and Lazarus (1984) define coping as one's continually changing cognitive and behavioral efforts to manage internal and external demands that tax or exceed available resources. A person first evaluates the potential threat of the stressor, appraising it as stressful, positive, controllable, challenging or irrelevant. Next, the individual assesses his or her coping resources and options, and determines what coping efforts or actions are needed to mediate the threat and restore

balance, such as a state of emotional well-being. Attempts to cope with stressors may include dispositional styles such as optimism or seeking information, meaning-making efforts, or cognitive, behavioral, or emotional efforts to manage problems. In the context of this theory, spiritual coping strategies represent both a meaning-making and behavioral effort to increase resources and motivation for meeting the demands of the stressor. Additionally, prior to crisis events, spirituality may serve as a protective factor that increases one's capacity for coping with stress (Baldacchino & Draper, 2001).

Spilka, Shaver, and Kirkpatrick (1985), for example, suggested that religion supports positive coping by providing a sense of meaning, a sense of control, and a sense of self. While belief in God may contribute to a sense of meaning, control, and identity, Stoll (1989) asserted that such experiences are equally available to non-believers. Spiritual coping strategies (e.g., meditation/contemplation; hopefulness; helping others; and appreciating) have been shown to be effective in helping patients cope with physical illness (Baldacchino & Draper, 2001). Likewise, counselor's spiritual health has been linked to successful preventive and combating coping (Graham, Furr, Flowers, & Burke, 2001).

The frequency of daily, ordinary spiritual experiences, as measured by the Daily Spiritual Experiences Scale (DSES; Underwood & Teresi, 2002) has been linked with a variety of psychosocial factors. Frequent DSEs were significantly negatively correlated with anxiety ($r = -.394$, $p < .01$), depression ($r = -.220$, $p < .01$), perceived stress ($r = -.197$. $p < .01$), and total daily alcohol consumption ($r = -.200$, $p < .01$). Additionally, they were significantly positively correlated with optimism ($r = .352$, $p < .01$), perceived social support ($r = .183$, $p < .01$), and quality of life ($r = .240$, $p < .01$). Such data

suggests that spiritual involvement and engagement in daily life can bolster one's resources for coping with stress.

Spirituality and Addiction

Abuse of drugs and alcohol are widely seen as incompatible with religiosity and spirituality (Miller, 1998). "Drugs come to occupy the position of a higher power. In this sense, addiction is one of the clearest enduring models of idolatry--giving to something material that which is the rightful place of God" (p. 981). Nevertheless, the aim of drinking or drug use may be for a similar transcendent experience--one that moves the individual beyond pain and suffering toward a sense of wholeness, euphoria, or peace. As the addictive process progresses, however, substance abuse works against such goals.

In a letter from Carl Jung to Bill Wilson, co-founder of AA, Jung (1961) stated of his alcoholic patient, Rowland H. that

> His craving for alcohol was the equivalent on a low level of the spiritual thirst of our being for wholeness, expressed in a mediaval [sic] language: the union with God…You see, Alcohol in Latin is "spiritus" and you use the same word for the highest religious experience as well as for the most depraving poison. The helpful formula therefore is spiritus contra spiritum ["spirits against Spirit"].

Jung informed his patient that his case was hopeless without a spiritual conversion. Rowland H. went on to join the Oxford Group, an evangelical ministry where he did indeed have a transformative spiritual experience. Through the spiritual practices of self-survey, confession, restitution, meditation, prayer, service, and fellowship with others he, along with other alcoholics, were able to achieve and maintain sobriety (Wilson, 1961). Jung's early work with Rowland H., and his patient's subsequent recovery through the

Oxford Group, laid the foundation for the beginnings of AA and other TSPs. Through spiritually grounded principles, traditions, and practices these groups have helped countless numbers of people recover from addiction. It is important to note that spiritual models of addiction such as AA are separate from and do not support moralistic views (Miller, 1998).

Inquiry into the early and ongoing success of AA has lead to systematic research efforts aimed at understanding the role of spirituality in the prevention, treatment, and recovery from alcoholism and other addictions (Bliss, 2007). Miller (1998) suggested a framework for such research which explored spiritual/religious variables as: (a) risk/protective factors for substance use; (b) practices that influence the course of addiction; (c) dependent variables impacted by alcohol use or drug use; and, (d) components of the recovery process. As such, spirituality may serve as predictor, dependent, covariate, and independent variables in addiction research. A summary of the related empirical studies will be provided in the following sections.

Empirical Literature

Spirituality as a protective factor. Spirituality is an important protective factor against substance abuse (Shorkey, Uebel, & Windsor, 2008). Miller (1998) noted in a meta-analytic review of the literature that across all included studies, religious involvement predicts those who do *not* use illicit drugs. Religiously involved individuals are less likely to use alcohol and other drugs and less likely to experience adverse consequences if they do use (Gorsuch, 1995; Larson, Swyers, & McCullough, 1998). The mechanisms of this relationship, however, are not well understood.

Likewise, in a comprehensive review of the literature, Geppert, Bogenschutz, and

Miller (2007) found that those who considered themselves religious or spiritual had more

negative attitudes toward substance use than those who did not. This was particularly

true for fundamentalist or proscriptive religions. From an individual perspective, such

religious views may discourage abuse, but they may also perpetuate moralistic judgments

that blame addicts or view them as morally deficient or lacking in willpower. Such

shame-inducing attitudes actually increase the risk of dependence (Miller, 1998).

Religiosity, in fact, can become a risk factor for substance abuse for those who perceive

God as wrathful and punitive (Gorsuch, 1995). Additionally, among U.S. denominations

where abstinence is the norm (i.e., conservative Protestant religions), the risk for

dependence appears to increase (Hilton, 1991). Those with no religious affiliation or lack

of religious involvement, however, remain at highest risk for dependence.

While religious/spiritual involvement is generally revealed as a protective factor

against alcohol and drug abuse, causal inferences about this relationship cannot be

assumed (Miller, 1998). Furthermore, very little is known about why these relationships

appear so consistently (Geppert et al., 2007). Longitudinal and prospective studies are

recommended to address the limitations of cross-sectional studies, which comprise the

majority of the literature base.

Spiritual practices and the course of addiction. Although research supports the

widely held belief that spirituality is important in the recovery process, the role of

spiritual processes and interventions in alleviating addiction and related suffering are not

yet well understood (Geppert et al., 2007). In general, religious affiliation and spiritual

involvement serve as protective resources against alcohol and drug problems (Miller,

1998). Roland and Kaskutas (2002), for instance, found that church attendance in

combination with the spiritual practices associated with AA, were significant predictors of past 30-day sobriety compared to church attendance alone. Alcohol and drug abuse, however, are generally associated with a reduction in religious practices, such as attending church (Bliss, 2007).

For those who move away from religious involvement during the course of substance use, spiritual practices such as prayer and meditation may continue to play an important role in the recovery process. Carter (1998) found that among recovering addicts, those with increased spiritual practices had fewer relapses and longer term recovery. The practice of Transcendental Meditation (TM), for instance, has been associated with both lower risk for substance use and a facilitative component of recovery (Alexander, Robinson, & Rainforth, 1994; Aron & Aron, 1980). Likewise, the private practices of prayer and spiritual/scripture reading have been associated with lower risk for alcohol use disorders (Koenig, George, Meador, Blazer, & Ford 1994).

TSPs which emphasize the central role of spirituality in achieving sobriety and improving the quality of life, serve a valuable role in recovery from substance abuse disorders (Bliss, 2007; Carroll, 1993; Carter, 1998; Miller, 1998). These programs emphasize the role of daily spiritual practices such as prayer and meditation, confessing one's wrongs, and making amends, which are associated with recovery from alcoholism (Brown & Peterson, 1991). The attribution of behavior change to a "spiritual awakening" (AA, 2001) brought about by working the steps, however, remains contentious. In order to better understand the relationship between spiritual practices and recovery, Kelly, Stout, Magill, Tonigan, and Pagano (2011) examined the mechanisms of behavior change among a group of adults ($N = 1726$) in AA over the course of 15 months.

In their randomized controlled trial, Kelly et al. (2011) found that after controlling for confounding variables, AA attendance was associated with increases in spiritual practices, especially for those who were low on this measure at intake. Additionally, the authors found that participation in AA yielded better alcohol use outcomes (fewer drinks per drinking day; greater number of days abstinent) than those who did not attend AA. This relationship was partially mediated by increases in spirituality in both outpatient and aftercare samples. The results of this study were significant even for those who identified as atheist or agnostic. Based on the results of this study and a systematic review of research on the mechanisms of behavior change in TSP, Kelly et al. (2011) and Kelly, Magill, and Stout (2009) suggested that the spiritual program of AA and other TSPs activate change through common process mechanisms associated with increasing self-efficacy, coping skills, motivation, and facilitating adaptive social network changes. Specifically, the authors suggest that TSPs (a) lend existential and adaptive meaning to the suffering of addiction, (b) increase spiritual practices that act as resources for positive coping, (c) offer a supportive community of belonging, and (d) provide the allure of redemption from the shame and stigma associated with addiction.

The results of the studies by Kelly et al. (2011) and Kelly et al. (2009) suggest that the spiritual changes associated with participation in AA and other TSPs are accessible to non-believers, though they may be reticent to engage in such spiritual programs of change. Similarly, Tonigan, Miller, and Schermer (2002) found that despite less AA attendance among atheists and agnostics, there were no significant differences in drinking outcomes between this population and religious/spiritual clients. Those who were unsure of their religious/spiritual beliefs, however, had much poorer outcomes in

terms of abstinence, severity of dependence, and associated alcohol related consequences. The authors concluded that belief in God is not necessary to achieve the benefits of AA. Reticence among atheists and agnostics to initiate and sustain participation in TSP, however, should be recognized and addressed by clinicians. Additionally, atheists and agnostics may be more open to non-TSP spiritual practices, which have been shown to improve substance abuse treatment outcomes (Robinson et al., 2011).

Although harm reduction approaches to substance abuse treatment, such as MMT, are generally seen as incompatible with abstinence based TSP programs, a qualitative study conducted by Ronel, Gueta, Abramsohn, Caspi, and Adelson (2011) challenged this assumption. Ronel et al. sought to target the spiritual needs of MMT patients by integrating professionally led TSP into treatment for heroin-addicted clients. Groups incorporated the spiritual practices associated with traditional TSPs (i.e., meditation, daily journaling on step work, use of recovery language and slogans). In-depth interviews were conducted with 32 group members (18 men and 14 women) and analyzed using a phenomenological approach. Additionally, group leaders' observations and reports were included as a source of data. The authors' noted differences in working with the MMT population versus traditional abstinent individuals. MMT patients, for instance, were slow to admit powerlessness and suffering in the present because they were not necessarily at "rock bottom" due to receiving ongoing methadone maintenance for their addiction. Despite such differences, the authors concluded that the pragmatic practices of TSP, such as the use of recovery language and slogans, were especially helpful for creating a sense of fellowship among group members and in integrating spiritual principles into daily life, ultimately benefiting their recovery.

These results echoed Carroll's (1993) study which found that AA attendance and involvement were significantly positively correlated with a higher purpose and meaning in life and length of sobriety. Trends in spiritual practices vary, however, according to length of time in recovery. According to Brown and Peterson (1991), individuals in early recovery, tend to engage in multiple spiritual practices while those in the maintenance stage engage in fewer but more sustained practices. While a sense of fellowship, connection, and support may provide the primary motivation for TSP attendance (Geppert et al., 2007; Nealon-Woods, Ferrari, & Jason, 1995), spiritual practices (rather than beliefs) appear to be essential in facilitating the change processes associated with recovery.

Several research efforts have examined the role of non-TSP spirituality in recovery. Ludwig (1985) found through qualitative interviews with 29 spontaneous remitters who had achieved abstinence, that although cognitive factors were more responsible for maintaining recovery, spirituality provided an impetus to initiate recovery. In another study of 236 individuals recovering from substance abuse, Pardini, Plante, Sherman, and Stump (2000) found that level of spirituality and improved life functioning were positively and significantly correlated. Likewise, a study by Robinson, Krentzman, Webb, and Brower (2011) found that DSEs predicted favorable drinking outcomes among a sample of alcohol dependent individuals from AA, abstinence-based treatment centers, and untreated participants from the community. Private spiritual/religious practices and forgiveness of self, however, were the strongest predictors of improvements in drinking outcomes over the course of six months. The results of this study extend previous findings by suggesting that spiritual change predicts positive substance abuse

outcomes, even after controlling for AA involvement.

In conclusion, spirituality represents an important source of meaning that may serve as a buffer against substance use, provide the motivation for managing addiction, and give understanding to the suffering experienced by many individuals who enter recovery. Those who practice their spiritual principles, however, appear to have a higher incidence of recovery than those who only profess their spirituality. As such, integrating supportive spirit-centered practices act into substance abuse treatment is recommended in order to increase positive resources for recovery.

The influence of addiction on spirituality. While research findings generally reveal a strong correlation between higher levels of spirituality and improved treatment outcomes, much of this research does not control for pre-existing levels of spirituality or examine changes in spirituality throughout the course of addiction (Bliss, 2007). Stewart (2004), however, conducted a pretest-posttest design study comparing clients of three different programs (Veteran's Administration Treatment, Drug Court, and residential women's treatment) to determine if spirituality and religiosity changed significantly during treatment. Despite two of these programs' utilization of TSP principles, no significant changes in spirituality were noted on any of the 14 measures of spirituality or religiosity used in the study.

In contrast to Stewart's (2004) study, Jarusiewicz (2000) found significant differences between a group of recovering individuals with three or more years of abstinence and those who continued to relapse. The abstinent group had statistically greater levels of faith ($t = 11.118$, $p < .0001$) and spirituality ($t = 2.335$, $p = .024$) than those who continued to relapse.

Likewise, Robinson, Cranford, Webb, and Brower (2007) found in their descriptive longitudinal survey study that individuals diagnosed with alcohol use disorders ($N = 127$) had statistically significant increases in spirituality and/or religiousness six months after entry into outpatient substance abuse treatment. These changes occurred in the behavioral and experiential dimensions of spirituality (e.g., spiritual/religious practices, DSEs, forgiveness, positive religious coping, and sense of meaning and purpose). Specifically, changes in DSE and Purpose in Life (PIL) scores from baseline to 6 months predicted higher odds of no heavy drinking at 6 months (DSE: *OR* = 1.04, 95% *CI*: 1.01-1.08; PIL: *OR* = 1.03, 95% *CI*: 1.01-1.07). That is for or every 1-unit increase in DSE scores from baseline to 6 months, the odds of no heavy drinking increased by about 4% and about 3% for every unit change in PIL. Given the average changes in DSE and PIL scores from baseline to 6 months, the odds of no heavy drinking at 6-months increased approximately 12%. These changes held even after controlling for AA involvement and gender. There were no significant changes, however, in religious/spiritual beliefs or perceptions about the nature of God, the cognitive spiritual components measured.

While spiritual loss is often noted by those with substance use disorders (McGovern, 1986), the results of the study conducted by Jarusiewicz (2000) and Robinson et al. (2007) suggest that spiritual practices and experiences are amenable to change and support long-term sobriety. The direction of this change, that is whether spiritual change supports reduction in drinking or whether reductions in drinking support spiritual change, cannot be determined. Additionally, there could be moderating or mediating variables in this relationship which were not measured. The study conducted

by Robinson et al. (2007), however, is the first to report effect sizes for changes in spiritual/religious variables over time for addicted populations. Although the effect sizes appear to be small to moderate based on Cohen's (1992) guidelines, further research is needed to accurately classify their magnitude. Additionally, further research is needed to determine whether these results are durable among populations with other addictions.

Multicultural Considerations

Much of the research on the role of spirituality in addiction and recovery relies on predominantly male samples (e.g., Jarusiewicz, 2000; Kelly et al., 2011), with some studies not reporting the demographic variables of participants (e.g., Carter, 1998). Bliss (2007) suggested that traditional TSP samples (i.e., White, male, middle class, Protestant) do not necessarily reflect all persons with substance abuse problems, thus raising questions regarding the efficacy of TSP for non-traditional samples and marginalized populations (i.e., atheists and agnostics, women, gay men, non-Whites, non-Judeo Christians). Additionally, this research is largely individualistic in nature, ignoring the role of spirituality in the recovery process for family systems and more collectivistic cultures. Despite these limitations, TSPs are free, long-term, easily accessible, and tailored to meet the needs of diverse groups through exposure to common recovery related elements. Although there is only limited research on spirituality as it relates to the unique roles and experiences of women in recovery, the existing literature suggests important implications for research, education, and practice (Kelly et al., 2009).

For women who have experienced trauma, the role of spirituality in recovery requires special attention. Based on data from 666 diverse economically disadvantaged women from three pooled samples, Fallot and Heckman (2005) found that women trauma

survivors with co-occuring mental health and substance abuse disorders rely heavily on religious and spiritual coping compared to the general population. Positive spiritual coping, or drawing on spirituality as a source of support, strength, or collaborative force in the face of stress, was associated with less severe mental health and posttraumatic stress symptoms. Conversely, negative spiritual coping, or viewing traumatic or violent events as reflecting divine punishment or abandonment, was associated with more severe psychiatric and posttraumatic symptoms. A significant finding of this study was that childhood sexual abuse was strongly linked with negative religious coping. Additionally, in general African American women reported more positive religious and spiritual coping and fewer mental health symptoms, suggesting an important link between spiritual coping and culture. There were no significant correlations, however, with substance abuse indicators though the authors suggest that spirituality may be an important moderator in recovery because of its relationship to less severe trauma and mental health symptoms. This study highlights the need to assess not only for spirituality and religiosity but also to inquire about whether these beliefs and practices serve as positive resource or an obstacle for recovery. By integrating spiritually informed care into substance abuse treatment models, women may be better able to mobilize spiritual resources as motivation and sustenance throughout the recovery journey.

The spiritual needs of pregnant, post-partum, and parenting women in recovery have also not been widely attended to in the spirituality literature. DiLorenzo, Johnson, and Bussey (2001), however, addressed the systemic role of spirituality in promoting positive outcomes for both substance abusing parents and their children. The authors view maternal addiction as a spiritual crisis; a condition of being detached from the

spiritual self and the wider community. This disconnection, according to DiLorenzo et al., impairs a woman's capacity for trust, intimacy, moral and responsible decision-making, and delaying gratification. The authors argue that by addressing these spiritual domains in substance abuse assessment and throughout the treatment process, the risk of child maltreatment decreases. By honoring the unique treatment needs of women, the authors suggest that providers are actually honoring the woman as a spiritual being, which supports her recovery. The views of DiLorenzo et al. (2001) were supported by Jesse et al. (2006), who found that spiritual resources may mediate against health risk behaviors in pregnancy. In particular, spirituality and religiosity were associated with decreased smoking and substance use during pregnancy.

Women are a heterogenous group with diverse spiritual experiences, beliefs, and needs. While trauma and the unique role of women as mothers suggest special considerations related to spirituality, so too do other elements of self and identity. Sexual minority women of color, for instance, are at a much higher risk of substance abuse (Mereish & Bradford, 2014). While spirituality is generally a very strong resource for recovery among African American women (Fallot & Heckman, 2005), Singh and Lassiter (2012) have noted the power of heterosexist and homoprejudiced political and religious climates to cause harm, shame, and stigma at the intersection of sexuality and spirituality, ultimately leading to poorer recovery outcomes.

These studies reveal potential limitations in existing spirituality research, which relies on predominantly male, Caucasian, Protestant, middle class samples drawn from TSPs. Existing studies of diverse samples of women, however, suggest the importance of recognizing spiritual heterogeneity among women in recovery. When a set of

ethnocentric assumptions about spirituality are imposed through treatment and research the rich cultural dimensions of spirituality cannot be accessed and mobilized to support recovery. The following section will address the intersection of spirituality and SOC in addiction treatment.

Spirituality and SOC in Addiction Treatment

Folkman and Lazarus's (1984) stress-coping theory is congruent with Antonovsky's (1979, 1987) salutogenic theory, in that one's internal, material, social, and cultural resources (GRRs) serve as buffers to avoid and combat the effects of stressors. Antonovsky, however, suggested that these resources strengthen SOC, and thus the ability to employ cognitive, affective (emotional), and instrumental strategies likely to improve coping, and thereby well-being. Through this lens, spirituality becomes a salutogenic resource, which influences or promotes a strong SOC (Antonovsky, 1979, 1987; Unterraineret al., 2010; Unterrainer et al., 2011). Thus, despite external circumstances or challenges, one's spirituality may support viewing the world as comprehensible, manageable, and meaningful.

Specifically, spiritual beliefs and practices contribute to viewing the world as comprehensible or as understandable, orderly, and consistent, rather than chaotic, random, and unpredictable. Such a view supports individual agency in terms of decision making and influencing the course of events. Additionally, spirituality may assist one in recognizing and seeking out available resources to meet life's changing demands, thus contributing to a sense of manageability. Finally, and perhaps most importantly, spirituality may contribute to a sense of meaning, or an appraisal of life's demands as challenges, worthy of investment and engagement. According to Antonovsky's (1979,

1987) theory, meaning provides motivation for coping and is the central tenant of SOC. The role of spirituality as a salutogenic resource for recovery from addiction thus warrants further attention.

From a salutogenic theoretical perspective, spirituality serves as a health promoting GRR, which helps to avoid or combat a wide range of stressors associated with substance use and addiction (Arévalo, Prado, & Amaro, 2008). Additionally, spirituality may serve to strengthen SOC by contributing to a sense of meaning, which provides motivation for coping. Using the PIL scale (Crumbaugh & Maholick, 1964), many studies have found that alcohol and drug abuse are associated with a lack of a sense of meaning in life in relation to normal samples (e.g., Carroll, 1993; Waisberg & Porter, 1994).

Despite the central role of meaning in promoting a strong SOC and in combating addiction, few studies have used SOC or a sense of meaning in life as dependent variables. Chen (2001), however, conducted a one-year longitudinal repeated measures study examining the effect of treatment (spiritual program vs. non-spiritual program) on the strength of SOC among Israeli inmates ($N = 93$). Comparisons between groups on the first and fourth measures indicated that inmates who participated in a spiritual program ($n = 43$; NA plus 12-steps) had a significantly higher SOC ($F_{(1, 78)} = 4.16$, $p < .05$), a greater sense of meaning in life, and a gradual reduction in the intensity of negative emotions (depression, anxiety, and hostility) compared to those participating in NA meetings alone ($n = 50$). Chen suggested that these results indicate a relationship between treatment intervention and increases in SOC through a spiritual program of recovery.

These results were supported by a study Arévalo et al. (2008) U.S. based study examining the mediating role of spirituality, SOC, and coping responses in the associations between perceived stress, post-traumatic stress (PTS) symptomology, and alcohol and other drug (AOD) addiction severity. In this repeated measures, multi-site, cross-sectional design study of 393 low-income ethically diverse women, negative associations were found between perceived stress and spirituality and between PTS symptomology and spirituality. The authors note the prevalence of significantly lower SOC levels among treatment participants ($M = 39.28$) in comparison with SOC levels reported for women in other studies. Hintermair (2004), for example, reported that women caring for children who have disabilities had a mean SOC score of 63.6, and random samples of German women had a mean score of 64.0.

In this study and in contrast to previous research (e.g., Chen, 2006), Arévalo et al. (2008) did not find SOC to be a mediator among any of the relationships measured, assumedly due to the low variability of SOC in the sample. Nevertheless, the authors recommended developing and integrating interventions into substance abuse treatment that increase patients' spiritual and coping resources and provide them with the skills for stress reduction. Arévalo et al. (2008) provide several evidence-based examples of curriculum that integrate mindfulness and spirituality into the treatment of addiction. The authors recommend further research exploring the role of spirituality among women receiving treatment for AOD disorders since spirituality plays an important role in their psychosocial adjustment. Based on the recommendations and gaps in the literature, this study introduces an expressive arts group therapy intervention intentionally structured to strengthen SOC and promote spiritual practices among pregnant, post-partum, and

parenting women.

Summary

In conclusion, spirituality serves as a both a protective factor against substance (Miller, 1998; Shorkey et al., 2008) and an important resource for recovery (Carter, 1998; Koenig et al., 1994; Roland & Kaskutas, 2002; Underwood & Teresi, 2002). Specifically, spiritual practices support increases in ordinary DSEs (Underwood & Teresi, 2002), which are linked with longer periods of sobriety, fewer relapses, and abstinence (Carter, 1998; Robinson et al., 2007; Robinson et al., 2011; Zemore & Kaskutas, 2004). Additionally, spirituality may strengthen SOC by contributing to a sense of meaning, the central factor of the construct (Antonovsky 1987, 1997; Unterrainer et al., 2010; Unterrainer et al., 2011). Despite the role of SOC and spiritual experiences in recovery, there is a lack of research examining interventions intentionally structured to promote these factors.

EXA, however, is a distinct discipline of integrated arts practice oriented toward health and healing that is supported by the literature to promote spirituality, meaning-making, manageability, and understanding of life experience (Appalachian Expressive Arts Collective, 2003; Knill, Levine, & Levine, 2005; McNiff, 2009; Rogers, 1993). EXA has been used with diverse populations and varied settings to promote positive mental health (Malchiodi, 2013; McNiff, 2009;) and substance abuse outcomes (Brooke, 2009). The following section will explore the role of EXA in promoting the salutogenic outcomes of SOC and DSE.

Expressive Arts Therapy

Creativity has been defined as bringing something new into being in a way that

projects one fully into the world (May, 1975). Indeed, creativity and the arts are widely considered birthrights of being human and natural resources for healing (Appalachian Expressive Arts Collective, 2003; Atkins & Williams, 2007; Eberhart & Atkins, 2014; McNiff, 2009; Rogers, Tudor, Tudor, & Keemar, 2012). Arts-based approaches in counseling honor creativity not only as a valid way of knowing and experiencing the world but also as a universal language that connects us all (Deaver & Shiflett, 2011; Gladding, 2005).

In ancient times and among indigenous cultures, the arts were not separate from life but instead woven into its very fabric and considered integral to overall wellness and healing (Appalachian Expressive Arts Collective, 2003; Atkins & Williams, 2007; Eberhart & Atkins, 2014; Knill, Barba, Fuchs, 1995; McNiff, 2009). Throughout history individuals and communities have sung while cooking, danced and drummed to celebrate a harvest, and created dramas to tell shared stories (Appalachian Expressive Arts Collective, 2003; Atkins & Williams, 2007; Eberhart & Atkins, 2014; Knill et al., 1995). The arts were integral in marking the seasons of both the human and natural world. In addition to their role in ordinary life, expressive modalities have also been summoned for their reparative properties (Malchiodi, 2013). Ancient Egyptians, for instance, encouraged artistic expression for those with mental illness (Fleshman & Fryrear, 1981), and the Bible tells of King Saul's distress being calmed by David's song and harp. The arts are thus both daily sustenance and intentional medicine for the pains of the mind and soul. It is in this spirit that the interdisplinary and integrative field of EXA emerged (Appalachian Expressive Arts Collective, 2003; Atkins & Williams, 2007; Eberhart & Atkins, 2014; Knill et al., 1995; Knill et al., 2005; McNiff, 2009).

In contrast to specific art therapies (i.e., dance therapy, poetry therapy, art therapy) or the grouping of individual art therapy specializations, referred to by the term *creative arts therapy*, EXA is a distinct discipline of integrated and intermodal arts practice oriented toward furthering the well-being of others (Appalachian Expressive Arts Collective, 2003; Atkins & Williams, 2007; Knill et al., 1995; Knill et al., 2005; McNiff, 2009; Rogers, 1993).   The Appalachian Expressive Arts Collective, defines EXA as

the practice of using imagery, storytelling, dance, music, drama, poetry, movement, dreamwork, and visual arts together, in an integrated way, to foster human growth, development, and healing. It is about reclaiming our innate capacity as human beings for creative expression of our individual and collective human experience in artistic form. Expressive arts therapy is also about experiencing the natural capacity of creative expression and creative community for healing (p. 3).

The rationale for integrating all of the arts into therapy is based on the premise that the arts influence one another and affect how we feel and think (Appalachian Expressive Arts Collective, 2003; Knill et al., 1995; Knill et al., 2005; McNiff, 2009; Rogers, 1993). Through intermodal EXA, the whole person is engaged in giving inner experience outer creative expression. Engaging with multiple arts modalities activates the imagination and supports individuals in fully exploring and expressing thoughts, feelings, fears, and experiences (Gladding, 2005). New forms emerge and with them new possibilities for healing and growth. Used together, the arts give shape and form to human experience, hold and express emotional and reflective experience, and expand and deepen personal understanding and meaning (Atkins & Williams, 2007). Art-making

thus facilitates the inherently creative therapeutic process of *poiesis*, or the act of

responding to and shaping experience in a way that brings something new into the world

(Knill et al., 2005).

Historical Context

      While EXA continues an ancient tradition of using all of the arts to support

individual and community well-being, its formal place in the field of psychotherapy is

less than fifty years old (Atkins & Williams, 2007). The roots of EXA as a distinct

discipline began in 1970 with McNiff's (1981, 2009) creation of an integrated arts studio

at Danver's State Hospital, a residential psychiatric institution in Massachusetts. Buoyed

by the therapeutic community movement of the 1970's, which emphasized the healing

potential of creative space and creative community, the hospital embraced the potential of

this approach. Considered part of milieu therapy, the expressive arts studio at Danver's

State Hospital became a healing and humanizing sanctuary for patients in an otherwise

sterile, harsh, and bleak institutional setting.

      Under the mentorship of Arnheim (1974), Harvard professor and the leading

psychology of art researcher, McNiff (2009) and his colleagues engaged groups of

psychiatric residents in the use of various art forms and modes of expression. Through

the integrated use of the arts, which encouraged "total expression" (McNiff, 2004, p. 147)

in a therapeutic group milieu, they observed behavioral, perceptual, cognitive, emotional,

and social improvements in the patients. As a result of a partnership with the local

Addison Art Gallery, Danver's State Hospital patients were given the opportunity to

bridge into the community both by exhibiting their art for the public and by establishing

the first community-based EXA studio. This generated enthusiasm in the community for

arts-integrated methods in mental health and lead to McNiff representing expressive

therapy on state level public mental health boards. These initiatives increased exposure

of and interest in the emerging field of EXA. Meanwhile, Gallas (1994), an educator

trained in arts-integrated methods at Lesley University, used the principles of therapeutic

creative community and intermodal arts expression with young school children,

observing that children's access to varied sensory activities and media of expression

improved learning outcomes (McNiff, 2009). McNiff, in collaboration with Gallas,

began the first formal training programs in expressive therapy and integrated arts

education at Leslie University in 1974. As a multidisciplinary clinical training graduate

program, the expressive therapy Master's degree engaged students across mental health

fields (i.e., psychology, social work, counseling) in integrating the arts into

psychotherapy. Such programs now exist nationally and internationally at the certificate,

bachelors, masters, and doctoral levels. The theoretical viewpoints shaping the emerging

field of EXA will be discussed in the following section.

Theoretical Background

Although McNiff's (2009) role was essential in establishing the practice and

academic field of EXA, Knill (1979) is often considered the founder of the discipline due

to his role in articulating intermodal expressive arts theory and differentiating it from

existing creative arts therapies. Knill drew from his own multidisciplinary background in

establishing the theoretical basis of the emerging field of EXA (Knill et al.,1995). From

his aesthetic training in music, Knill drew from Roscher's (1976) theory of polyaesthetic

education, which is based on the premise that working with the arts holistically fully

engages all of the senses thus enhancing perception, consciousness, and capacity for

communication. From his background in math, science, and psychology, Knill applied crystallization theory to the basic human need to bring order out of chaos, to make sense of lived experience, and to give it existential meaning. The arts, he suggested, are uniquely positioned to support this crystallization process of moving toward optimal clarity, order, and precision of thought and feeling. In this way, the creative process and the art forms that emerge facilitate the existential and humanistic goals of growth and meaning making.

In addition to polyaesthetics and crystallization theory, Knill advocates for the integration of intermodal theory into EXA training and practice (Knill et al., 1995). Intermodal theory (Decker-Voight, 1975; Frohne, 1983) involves an investigation of the arts and their qualities, including their particular sensory modalities and their innate synesthetic nature (Knill et al., 1995). Painting, for instance, is a primarily visual modality, but the intermodal therapist recognizes that visual images can also be engaged through voice and movement. Additionally, intermodal training equips practitioners for working with individual preferences, anxieties, and resistances, which are often triggered by engaging with the arts. Moreover, EXA training grounded in intermodal theory refines the therapist's intuitive presence, intentionality, and skill in shifting from one art form to another (Eberhart & Atkins, 2014; Knill et al., 1995). The intermodal practitioner must also pair his or her knowledge of sensory modalities with group dynamics and the goals of the individuals or the collective (Knill et al., 1995). Painting, sculpting, and writing, for instance, are more private art-making experiences and may be used to support individuation while dance, movement, and music are more suited for exploring relationships and coalitions in groups.

In addition to intra- and interpersonal considerations, Knill et al. (1995) suggest that the intermodal therapist should be trained in the transpersonal role of the arts. The arts have long been employed in spiritual, religious, or ritualistic ways to facilitate healing and growth. Awareness and respect for the archetypal and sacred power of the creative expression allows the trained intermodal therapist to access and mobilize the arts as spiritual resources in therapeutic work. Knill, for instance, advocated for engaging with art images and forms from a phenomenological perspective rather than an interpretive one (Knill et al., 1995). Specifically, he asserted that the authority for meaning making lies in the art itself and in the wisdom of the individual, rather than in an external authority or expert who interprets the images. Such interpretive or analytical practices are central to individual art therapies, though McNiff (2004) suggested that these techniques constitute "image abuse" (p. 70). In contrast, EXA is a therapy of the imagination with art forms emerging as messengers of healing (McNiff, 2004). Through practices such as dialogue art images are allowed to "speak," giving voice to one's internal wisdom and spiritual resources for healing. Likewise, the practice of aesthetic analysis (Knill et al., 2005), which explores the surface of the work, the process of shaping it, the experience of doing it, and what the art has to say, allows the person to decenter from the problem, refocus on the art, and translate the internal or spiritual resources that emerge in this process back to the problem. Through these practices, both the client and therapist make room for the multiple perspectives that can emerge from art-making (Appalachian Expressive Arts Collective, 2003; Atkins & Williams, 2007).

In addition to McNiff and Knill, Rogers (1993, 2011) has been a pioneer in articulating both the transpersonal and humanistic principles in the practice of EXA. Rogers, founder

of Person-centered EXA, suggests that psychotherapy is inherently a creative process, in that it awakens one's creative life force and self-actualizing potential. Rogers' theory of creative connection emphasizes the interconnectedness of all of the arts. By moving from one art form to another, Rogers suggests that one moves closer to his or her authentic self. As a process-focused approach, person-centered EXA leaves meaning-making and understanding to the individual. Within person-centered and humanistic EXA traditions, the primacy of the therapeutic relationship, the core conditions of counseling, the person of the therapist, and the curative role of presence are emphasized (Appalachian Expressive Arts Collective, 2003; Eberhart & Atkins, 2014; Rogers, 1993).   The therapeutic relationship is collaborative and egalitarian in nature, focusing on the salutogenic goals of optimal health and well-being rather than the diagnosis or the treatment of disease (Appalachian Expressive Arts Collective, 2003; Eberhart & Atkins, 2014; Rogers, 1993, 2011).

In addition to the theoretical approaches articulated by Knill, McNiff, and Rogers, the Appalachian approach (Appalachian Expressive Arts Collective, 2003; Atkins and Williams, 2007) has significantly contributed to the emerging field of EXA. Since the 1980's faculty from diverse disciplines have engaged in the collaborative process of writing, teaching, and curriculum development in EXA. In addition to its interdisciplinary focus, the Appalachian approach emphasizes the importance of the natural world as a model for creativity and a metaphor for the cycles of life. Likewise, given the resonance between the inner landscape of the psyche and the outer landscape of the world, the Appalachian approach is distinguished by its focus on dreamwork and imagination as significant allies in EXA work supporting access to internal resources and

the realization of new possibilities for human problems.

Although EXA is a discipline unto itself with its own theoretical foundations, Degges-White and Davis (2011) emphasized that the expressive arts can be integrated into the major theoretical orientations (e.g., narrative therapy, cognitive-behavioral therapy) shaping the practice of counseling today. As such, the Appalachian approach encourages the development of a personal theory that both synthesizes relevant existing theory and expresses the uniqueness of the practitioner and his or her identity, integrity, and personal life experience (Atkins & Williams, 2007). Additionally the Appalachian approach encourages practitioners to develop a personal daily practice of engaging with the arts, which contributes to professional integrity and commitment to personal healing and growth (Appalachian Expressive Arts Collective, 2003; Eberhart & Atkins, 2014). As a genuine and congruent practitioner, the therapist can create and hold therapeutic space and act as a guide, witness, or fellow sojourner in the expressive arts process. Grounded in personal practice, the therapist can stay present with clients through depth-oriented work, recognize the many sources of wisdom that emerge, and support the reclamation and redirection of these resources toward life's challenges. Finally, the Appalachian approach is distinguished by its emphasis on the role of the arts in community building. Whether art-making occurs individually or in group settings, the Appalachian approach values the role of community as a place for coming together, for sharing, and for witnessing and expanding the wisdom that emerges through engaging with the arts.

While art has a place in museums, galleries, and theatres, it also has a place in the daily life of ordinary people who can access its benefits directly through engaging in the

creative process (Appalachian Expressive Arts Collective, 2003; Knill et al., 1995; McNiff, 2009; Rogers, 1993). As stated by Atkins and Williams (2007), "In this time of separation, expressive arts therapy calls for the re-integration of all of the arts into therapeutic practice and into daily life" (p. 2). The historical context of EXA and its theoretical basis in humanistic, existential, postmodern, and phenomenological traditions distinguish it from the analytic medical model of art therapy and establish it as a relevant emerging discipline (Appalachian Expressive Arts Collective, 2003; Eberhart & Atkins, 2014; Knill et al., 1995; Lahad, 2000; McNiff, 2009; Rogers, 1993). The following section will review the current literature related to the mental health benefits of EXA.

EXA and Mental Health

There is significant empirical evidence suggesting the benefits of art making and expressive therapies on various pathogenic outcome variables (Bell & Robbins, 1997; Chandraiah, Anand, & Avent, 2012; Henderson, Rosen, & Mascaro, 2007; Kimport & Robbins, 2012; Pennebaker, 1997; Pennebaker & Evans, 2014; Sandmire, Gorham, Rankin, & Grimm, 2012). Bell and Robbins (2007), for instance, randomly assigned a general adult population of university and community participants ($N = 50$) to either a non-directive art production group, which had access to a variety of visual arts media, or a control group, which viewed and sorted art into like categories. Both groups engaged in the same negative mood inducing task of listing their 10 most pressing concerns or stressors, took pre-test assessments measuring anxiety (State-Trait Anxiety Inventory [STAI]; Spielberger, 1983) and mood state (Profile of Mood States [POMS]; McNair, Lorr, & Droppleman, 1971], completed the intervention, then completed the post-tests. Results indicated that the art production group experienced significantly greater

reductions in negative mood [POMS: $F_{(1, 48)} = 11.2, p < .005$] and anxiety [STAI-S: $F(1, 48) = 66.4, p < .001$; STAI-T: $F_{(1, 48)} = 23.7, p < .001$] from pre-test to post-test compared with the art viewing and sorting control group.

A pilot study conducted by Sandmire et al., (2012) found similar results among undergraduate students ($N = 57$) randomly assigned to either an art-making group ($n = 29$) or a no-intervention control group ($n = 28$). Students in the experimental group could choose from one of five directive art-making activities including: mandala design, free form painting, collage making, clay, or drawing. Results indicated significant improvements in the experimental group's state anxiety ($t = 3.98, p < .001$) and trait anxiety ($t = 4.20, p < .001$) from pre-test to post-test. No significant changes in state or trait anxiety were noted among the control group. Overall, there were significant differences between the art and no art groups with the art-making group experiencing significant reductions in state and trait anxiety [$F_{(1)} = 12.72, p < .001$].

The inclusion of clay among other visual arts media in the Sandmire et al. (2012) study was intentional, given the mediums's distinct therapeutic properties of supporting emotional expression and creating order out of chaos (Knill et al., 1995). Kimport and Robbins (2012) examined the efficacy of creative clay work for reducing negative mood. The authors randomly assigned 102 university students or graduates to four conditions (pinch pot clay making, unstructured clay handling, structured play with stress ball, unstructured play with stress ball). These conditions allowed the authors to examine interaction effects among instructions (structured or free), materials (clay or stress ball), and time (baseline, pretest, posttest). Each group took baseline mood (POMS) and state anxiety (STAI-S) assessments. Negative mood states were induced among participants

through viewing a series of traumatic news stories and noting a personal negative event on paper; pre-test scores on the assessments were then recorded. Each group then completed their assigned intervention for five minutes and took post-tests. Results indicated statistically significant improvements in mood [POMS: $F_{(1, 98)} = 7.6, p < .05$] and anxiety [STAI-S: $F_{(1, 98)} = 4.4, p < .05$] for the clay conditions over the stress ball conditions. No significant differences were noted between structured and unstructured conditions, though the greatest change from pretest to posttest occurred in the structured clay group.

While some research (Bell & Robbins, 2007; Kimport & Robbins, 201; Sandmire et al., 2012) supports the efficacy of art-making for improving negative mood states among non-clinical populations, a study conducted by Chandraiah et al. (2012) supports the effectiveness of art making on reducing symptoms of depression among clinically diagnosed adults. Specifically, the authors found that a semi-structured multi-media visual art therapy intervention significantly reduced symptoms of depression from pre-test to post-test among a heterogeneous adult sample of psychiatric outpatients ($N = 10$) in a medical university setting ($t_{(9)} = -5.43, p < .001$). This study, however, was limited by its small sample size and lack of control group.

In addition to mood benefits, art-making and expressive therapies can be efficacious in combating the sequelae of symptoms stemming from exposure to trauma (Henderson et al., 2007; Jung, 1964; Pennebaker, 1997; Pennebaker & Evans, 2014). In his therapeutic work, Jung (1964) used mandalas, or circle drawings, to support patient's visual and symbolic expression of traumatic material. In doing so, he found that the practice had an integrative and calming effect, which supported psychological health.

Like mandalas, expressive writing can support the expression of intrasychic material. In

a review of the literature, Pennebaker (1997, 2014) summarized empirical studies on

expressive writing, a structured and directive therapeutic writing protocol that promotes

the emotional expression of traumatic events. His analysis suggested that emotionally

expressive writing about traumatic events significantly reduced physician visits,

immunological markers of stress, physical symptoms, and negative mood states which

tend to increase following traumatic events. Additionally, expressive writing was

associated with the salutogenic outcomes of increased GPA, employment, and job

attendance.

Based on the work of Jung's study of mandalas (1964) and Pennebaker's

expressive writing protocol (1997), Henderson et al. (2007), developed a visual

expressive mandala making intervention to assess its impact on the remediation of

traumatic symptoms, as measured by the Posttraumatic Stress Disorder Scale (PDS; Foa,

1995). The authors hypothesized that the intervention would reduce symptoms of PTSD

by supporting the symbolic expression and containment of emotions and feelings related

to participants' trauma. In order to test their hypothesis, Henderson et al. randomly

assigned 36 undergraduate students experiencing at least moderate symptoms of PTSD,

but not currently in therapy or on medication, to experimental and control conditions.

Over three consecutive days, the experimental group engaged in mandala making while

the control group drew randomly assigned non-emotional objects. PTSD symptoms were

assessed at pretest, posttest, and one month follow-up. No significant differences were

observed at posttest; however, after controlling for differences in baseline levels of

trauma between groups, results at 1-month follow-up indicated that participants in the

mandala condition experienced statistically significant reductions in traumatic symptoms compared to those in the control group [$F_{(1, 35)} = 6.62$, $p < .015$]. Based on these results, the authors suggested that psychic integration of material following non-verbal interventions may take time. Though this study was limited by its small sample size, it nonetheless lends support to the efficacy of non-verbal and expressive interventions for ameliorating trauma.

The results of Henderson et al.'s (2007) study are supported by brain-based research on trauma. Positive emission tomography brain scans reveal that trauma decreases activity in Broca's area, the brain structure responsible for language production, and increases activity in the limbic system, which is related to emotional and physiological arousal (van der Kolk, 2002). Thus, trauma literally involves "speechless terror" (p. 150) concurrent with hyperarousal. Verbal therapies can thus compromise both psychological and neurobiological safety in traumatized clients, rendering such approaches ineffective or detrimental. In contrast, EXA engages the pre-verbal, nonverbal, metaphorical, symbolic, and right-brained processes, which ameliorate traumatic symptoms (Scott & Ross, 2011). Such non-verbal and expressive therapies, van der Kolk (2002) stated, are essential to decrease hyperarousal, re-experiencing, and avoidance symptoms of PTSD, to integrate disorganized sensations and action patterns, and to support expression of traumatic experiences.

The fields of psychology, psychiatry, medicine, and art therapy have been responsible for publishing the studies discussed above. While the literature supports the efficacy of art-making and expressive therapies for ameliorating a range of pathogenic outcome variables, further research is needed within the intermodal field of EXA.

Rooted in humanistic, existential, and postmodern, and phenomenological traditions, expressive arts therapists are uniquely positioned to examine not only what benefits the practice of EXA engenders but also the mechanisms through which healing occur. Furthermore, expressive arts therapists are trained in mobilizing and strengthening internal resources to promote the salutogenic outcomes; however, further research is needed to document the efficacy of such approaches. The following section will explore the role of the arts in treating addiction.

EXA and Addiction

The benefits of EXA align well with the goals and provision of substance abuse treatment. The use of groups as a primary intervention in recovery programs is both economical and therapeutic, affording clients the gifts of hope, universality, and feedback (Yalom, 1974). According to Yalom, groups decrease isolation, promote healthy interpersonal interactions, and offer a safe place to practice new prosocial behaviors and coping skills. For women, whose growth and development often occur through relationship, connection, and communication, group therapy represents a culturally responsive intervention with possibilities for individual, social, and community transformation and healing (Gilligan, 1977; Rogers, 2011). High levels of resistance, well-developed defense mechanisms, and personality dynamics such as compliance or narcissism, however, make typical verbal group therapy a challenge with substance abusing populations (Adelman & Castricone, 1986; Hanes, 2007; McNamee, 2003). Rather than viewing these behaviors as pathogenic, effective substance abuse clinicians come to accept them as a shared culture experienced by those in early recovery. From this point of view, EXA presents a culturally responsive treatment approach by

respectfully approaching the well-established defenses and personality dynamics of addicts through symbolic and non-verbal expressive modalities, which decrease resistance and bypass denial (Rogers, 1993, 2011). As such, the arts afford unique opportunities to minimize barriers and promote the therapeutic goals of substance abuse treatment through self-expression, which often leads to heightened self-awareness (Rogers, 2011). EXA is also well-suited to group formats as it supports the practices of witnessing and mirroring and the focus on process that are essential to the discipline (Eberhart & Atkins, 2014; Rogers, 2011).

Integrating the arts and creativity into substance abuse treatment promotes cognitive, emotional, relational, behavioral, and spiritual changes related to recovery (Hocoy, 2007; Johnson, 1990; Malchiodi, 2002; Matto, 2002; McNamee, 2003; Rogers, 1993; Wilson, 2003). For instance, the arts empower substance-abusing clients, who often have difficulty expressing feelings, to be vulnerable and take risks while still maintaining a sense of agency and control (Hocoy, 2007; Matto, 2002; McNamee, 2003). Thus, through the creative process, clients develop skills for emotional expression, regulation, and containment (Rogers, 1993, 2011). In addition to providing a non-verbal means of expression and tools for emotion regulation, substance abusing clients are often able to transform toxic shame and self-blame and improve self-esteem by engaging with the arts (Johnson, 1990; Wilson, 2003). This healing is facilitated, in part, through bilateral stimulation of the brain, which integrates the functioning of the right and left hemispheres (McNamee, 2003). At a brain-based level, this integration supports emotion regulation and meaning-making, thus facilitating self-awareness, insight, and identity formation (Malchiodi, 2002). Additionally, the exploratory nature of expressive arts

promotes creative problem solving, divergent thinking, cognitive flexibility, and the

development of multiple perspectives and new possibilities (Matto, 2002; McNamee,

2003). Art making can also be a process of inquiry (Eberhart & Atkins, 2014). Thus, by

engaging with the arts those in recovery can increase understanding of their addiction and

resources for recovery. For many, addiction leads to a sense of spiritual loss both of

one's true Self and a connection to a Higher Power (Jung, 1961). The creative process

activated in EXA, however, can reconnect the dis-spirited to their inner wisdom and both

facilitate and document the transformative changes that occur during recovery (Johnson,

2002).

In summary, EXA address many limitations of traditional substance abuse

treatment. Expressive arts group therapy thus provides a culturally appropriate and

clinically relevant framework for engaging substance-abusing clients in the recovery

process. Additionally, EXA supports the underlying factors of meaning, manageability,

and comprehensibility, which contribute to a strong SOC. The following section will

provide a review of the literature investigating the role of art in substance abuse treatment.

Empirical Literature

While much of the EXA and mental health research uses strong methodology,

most of the literature documenting arts-based approaches to substance abuse treatment

comes from the art therapy field and presents anecdotal, rather than empirical, evidence

(e.g., Hanes, 2007; Horay, 2006; Johnson, 1990; Matto, 2002). Hanes (2007), for

instance, suggested that the arts are instrumental in breaking through the pre-

contemplation stage of recovery, characterized by denial. In a brief report, Hanes shared

self-portraits produced by two chemically dependent clients in a brief inpatient

psychiatric hospital unit. The drawings helped these clients to recognize the nature of their addiction. One participant stated, 'This is what I look like when I'm drinking…I don't like what I see' (p. 34). After working with the image further and changing its orientation, the client gained further perspective stating, 'It is a man wearing a blindfold…I don't want to see my problem" (p. 34). While compelling and clinically effective, further empirical research is needed to explore the role of arts-based interventions in substance abuse treatment. Several conceptual models exist for integrating the arts into substance abuse treatment (e.g., Adelman & Castricone, 1986; Matto, 2002; Matto, Corcoran, & Fassler, 2003; Miller, 2013); however, these models have yet to be empirically explored through quantitative, qualitative, or arts-based research methods. The following review of the literature will be limited to the few empirical studies investigating the role of expressive therapies in substance abuse treatment.

In order to understand the role of expressive arts group therapy in the recovery process, Mohamad, Mohamad, Ismail, and Adawiah (2013) assigned a purposive sample of participants ($N = 30$) to either an EXA group or to a treatment as usual group. The study employed a phenomenological research design to understand participants' lived experiences in these groups. Through analysis of interviews, observations, and documents (journal writing, client's art), the authors identified shared themes and subthemes of the two groups related to recovery. These themes included the following: (a) giving meaning to experience (through language, symbol, and color), (b) healing (through increased expression, decreasing anger, and appreciation of support), (c) catharsis (through expression of emotion, anger, and caring), (d) awareness (through

spiritual emphasis, insight, religious music, thinking before acting, and acceptance of constructive criticism), and (e) self-confidence (through inner strength, recognition of positive change, and hope). The authors suggested that the expressive arts group explored their lived experience of addiction in more depth than the treatment as usual group, presumably due to the mixed media, which allowed clients a wider range of expression. This study, however, was significantly flawed in both its design and its methodology. The authors employed a treatment and comparison group design, characteristic of quantitative studies, yet qualitative methodology was used to identify themes among all participants. Conclusions about group differences appear speculative based on reported data. Results of this study should be interpreted with caution given these limitations. Furthermore, although the study suggests the use of expressive arts group therapy, the authors repeatedly use interpretive language to attribute meaning to the client's artwork. This practice is inconsistent with the theoretical foundation of EXA.

In a qualitative study on the benefits of art therapy for women who have relapsed, Hagens (2011) used heuristic inquiry methods to understand how women experienced chemical dependency and the recovery process, including whether the role of art contributed to their experience of recovery. Three consecutive sessions were conducted with three women in recovery who had relapsed at least three times. The first hour of the session consisted of a recorded interview about their experience of addiction, and recovery and the second hour was an open-studio, in which participants could access visual art making materials to express themselves in a non-directive way.

Through analysis of observation data, participants' daily journal entries, the researcher's personal journal, interviews, and discussion of personal art, Hagens (2011)

identified common experiences as well as individual differences among participants. Despite unique life histories, each woman was a single mother struggling to regain child custody and employment. Personal relationships, which triggered emotional responses such as loneliness, fear, anger, hurt, and sadness, were the common factors leading to relapse. Each woman also engaged in negative self-talk and noted their vulnerability for relapse when around 'old people, places, and things' (p. 52). The women noted gender-specific structured substance abuse treatment programs that promoted consistency (e.g., daily routines, dependable staff), accountability (e.g., urinalysis), and responsibility (e.g., meaningful roles in community life) as most beneficial for recovery.

Through art, the women in Hagen's (2011) study gained a powerful tool to aid their recovery. Specific benefits included: (a) personal awareness and problem-solving skills; (b) resources for coping with and externalizing negative emotions; (c) access to a means of safe non-verbal self-disclosure and expression; (d) increased clarity, perspective, and insight of personal issues and blocks to recovery; (e) movement toward an internal locus of control; (f) integration of slogans and recovery language through the creative process; (g) use of metaphors to understand recovery related conflicts; and, (h) increased self-confidence, self-worth, and self-efficacy. The daily, unstructured journal writing, however, was a less effective intervention, as the women often did not complete it. This study was conducted using art therapy methodology employed at the end of a verbal interview. Causal inferences about the role of art in recovery cannot be drawn based on the limitations of this design.

While unstructured journal writing was not found to be an effective intervention for substance abusing women (Hagens, 2011), a study conducted by Young, Rodriguez,

and Neighbors (2013), investigated the role of a directive and structured expressive writing interventions on drinking intentions among undergraduate college students. In order to empirically test this intervention, participants (N = 200, 76% female) were randomly assigned to three conditions: (a) writing about a time when they drank heavily and had a good experience (positive), (b) writing about a time when they drank heavily and had a bad experience (negative), or (c) their first day of college (neutral). Prior to the intervention, students completed standardized measures assessing their drinking behavior. Results indicated that participants in the negative treatment condition reported intentions to drink significantly fewer drinks per week than those in the positive or neutral conditions (b = -.227, $t_{(197)}$, p = .007). This was true for both light drinkers and heavy drinkers identified by the Alcohol Use Disorders Identification Test (AUDIT; Babor, Higgins-Biddle, Saunders, & Monteiro, 2001). Follow-up studies are needed to evaluate actual drinking patterns following the expressive writing intervention and to test multiple negative-condition prompts.

Several quantitative studies have explored the role of specific art therapy interventions on substance abuse related outcome variables. Cevasco, Kennedy, and Generally (2005) found that among ten females enrolled in gender-specific drug rehabilitation treatment, participants experienced significant decreases in depression, stress, anxiety, and anger immediately following the music therapy sessions. These results were obtained using a Likert-type scores (1 = absence of symptoms, 10 = extreme symptoms) recorded before and after the sessions in daily journals. The study further found no differences between the three different types of music therapy interventions (movement-to-music, rhythm activities, and competitive games). The authors suggested

that music therapy could serve as an adjunctive intervention to support clients in effectively coping with the stress of substance abuse treatment. Future studies of this sort should employ a control group design in order to test this assumption.

In a similar study, Howard (1997) employed a single system design (ABABAB) to provide alternating music and poetry therapy over the course of six weeks to explore differences in on-task behavior, goal attainment, and automatic thoughts according to the independent variable (music therapy or poetry therapy intervention). One site included adolescents in a mixed-gender outpatient substance abuse treatment program ($n = 12$). The second site included women ($n = 8$) in a residential substance abuse treatment facility. Results indicated that both interventions were equally effective for both groups in decreasing automatic thoughts, increasing on-task behavior, and facilitating weekly goal attainment. The authors noted high rates of on-task behavior based on observation checklists used while viewing recorded sessions. Despite this potentially positive finding, this study did not adequately control for threats to internal validity, and consequently, results should be interpreted with caution. Additionally, Howard reported the use of two methods of expressive arts counseling, music therapy and poetry therapy. Although music and poetry are often employed in EXA, music therapy and poetry therapy are distinct fields with their own methodology and theoretical basis. This study highlights the need for research grounded in the theory, principles, and practice of EXA.

Summary

In summary, the theoretical basis, principles, and practice of EXA are well-suited for addressing the co-occurring mental health and substance abuse issues of pregnant, post-partum, and parenting women. The existing literature base investigating the role of

the arts in substance abuse treatment, however, is limited. Many of the reviewed studies employed flawed designs and methodology, used imprecise terminology, and overstated results. Furthermore, there are a dearth of studies conducted in alignment with the theoretical basis, principles, and practice of EXA therapy. This study intends to fill a gap in the research and address several of these limitations by using a quasi-experimental design, employing a trained expressive arts therapist, ensuring treatment fidelity to an EXA therapy protocol, and using objective outcome measures. The specific expressive arts group therapy model will be discussed in the following section.

<div align="center">Expressive Arts Group Therapy for Women in Recovery</div>

Substance abuse has devastating effects on the physical, mental, emotional, spiritual, relational, and economic wellbeing of those who reach the disease state of addiction (NIDA, 2012). Particularly vulnerable, are pregnant, post-partum, and parenting women and their children (U.S. DHHS, 1992). Despite the risks of substance abuse on the mother and her unborn or dependent children, voluntary treatment utilization remains low (Kumpfer, 1991) and attrition high among this population (Grella, 1999).

In order to minimize barriers to treatment (i.e., caregiving responsibilities, shame and stigma) and address the underlying risk factors (i.e., trauma, poverty), gender-specific, comprehensive recovery programs are recommended for substance abusing pregnant, post-partum, and parenting women (Grella et al., 2000). Such treatment includes not only abstinence (i.e., TSP) and harm-reduction approaches (i.e., MMT), but also education, training, and resources for empowering women to meet their holistic needs (Ashley et al., 2003). Thus, substance abuse treatment for pregnant, post-partum,

and parenting women must focus not only on treating and interrupting the cycle of addiction but also on strengthening and mobilizing the comprehensive resources needed to maintain sobriety.

Two such resources for promoting positive treatment outcomes are spirituality and SOC. Those with a strong SOC have a sense of meaning in their lives, which provides motivation for coping and persisting in treatment (Chen, 2006; Feigin & Sapir, 2005). Additionally, those with a strong SOC understand the nature of their challenges and have access to the internal and external resources needed for managing them. As such, a strong SOC is linked with treatment retention, abstinence, and survival (Andersen & Berg, 2001; Berg, 1996; Chen, 2006; Feigin & Sapir, 2005).

Like SOC, spirituality serves as a protective factor against substance abuse (Miller, 1998; Shorkey et al., 2008). During the course of addiction, however, spiritual practices can be an important resource for recovery (Jarusiewicz, 2000; Robinson et al., 2007). From a salutogenic theoretical perspective, spirituality serves as a GRR, which helps to avoid or combat a wide range of stressors associated with substance use and addiction (Arévalo et al., 2008). Spirituality, in fact, may strengthen SOC by contributing to a sense of meaning, the central factor of the construct (Antonovsky 1987, 1997; Unterrainer et al., 2010; Unterrainer et al., 2011).

Given the role of SOC in predicting substance abuse treatment outcomes (Andersen & Berg, 2001; Berg, 1996; Chen, 2006; Feigin & Sapir, 2005) and mitigating substance-related problem behavior (Midanik et al., 1992; Midanik & Zabkiewicz, 2009; Nilsson et al., 2007) recommendations have been made in the literature to use SOC as a dependent variable in future research (Antonovsky, 1996; Feigin & Sapir, 2005).

Although several studies have noted changes in SOC following sustained periods of abstinence (e.g., Abramsohn et al., 2009; Chen, 2006), few studies have implemented targeted interventions to promote a strong SOC. Chen (2001), however, demonstrated that a spiritual program of recovery (TSP) strengthened SOC among Israeli prisoners compared with inmates in the non-spiritual program of recovery.   Such results are encouraging; however, no known studies have examined intervention-based changes in SOC among substance abusing pregnant, post-partum, and parenting women. This is especially salient, given that women appear to have lower SOC scores than men (Andersen & Berg, 2010; Antonovsky et al., 1987; Chen, 2009), and that pregnant, post-partum, and parenting women represent a particularly vulnerable population of women.

Likewise, most of the studies examining the role of spirituality in recovery use spirituality as an independent variable predicting substance use outcomes (e.g., Alexander et al., 1994; Aron & Aron; Carter, 1998; Geppert et al., 2007; Kelly et al., 2011; Koenig et al., 1994; Roland & Kaskutas, 2002). While TSPs are known to facilitate spiritual change (Brown & Peterson, 1991), few studies outside of the TSP framework have examined spirituality as a dependent variable. Furthermore, no known studies have examined non-TSP intervention-based changes in spirituality among substance abusing pregnant, post-partum, and parenting women. Given that a history of childhood sexual abuse is common among female substance abusers (Chen, 2009) and that such abuse is linked with negative religious/spiritual coping (i.e., Higher Power viewed as a source of punishment or abandonment), non-TSP methods of promoting spiritual change are recommended as part of substance abuse treatment (Fallot & Heckman, 2005). Burnard (1988) suggests that those who are spiritual but not religious

meet their spiritual needs through their inner self, nature, arts, music, and relationships.

Likewise, Stoll (1989) views spirituality as

> My being, my inner person. It is me expressed through my body, my thinking, my
>
> feelings, my judgments and creativity…Through my spirituality, I give and
>
> receive love; I respond to and appreciate God, other people, a sunset, a symphony,
>
> and spring (p. 6).

EXA, a distinct discipline of integrated and intermodal arts practice that fosters

human growth, development and healing, is supported by the literature to promote

spirituality, meaning-making, manageability, and understanding of life experience

(Appalachian Expressive Arts Collective; Knill et al., 2005; McNiff, 2009; Rogers,

1993). Given the strong alignment of EXA with the salutogenic construct of SOC, as

well as the integral role of daily spiritual practice in EXA (Eberhart & Atkins, 2014), a

new substance abuse treatment model is proposed. The proposed model will address

current gaps in the literature by implementing an EXA group intervention intentionally

structured to promote SOC (meaning, manageability, comprehensibility) and spiritual

practices to increase DSEs among pregnant and post-partum substance abusing women.

Guiding Principles for Expressive Arts Group Therapy

Presence. Eberhart and Atkins (2014) underscore the role of presence and process

in the practice of EXA. The concepts have served as the guiding principles in the

development of the expressive arts group therapy model used in this study. Atkins

(2014) describes relational presence in the context of the helping professions as a "way of

being" and an "experiential process of encounter" (p. 47) that encourage change in both

individuals and systems. This facilitative or invitational presence supports authentic

connection and forms the foundation for therapeutic work.

According to Atkins (2014), presence within the practice of EXA integrates Rogers' (1961) therapist-offered conditions of congruence, accurate empathy, and unconditional positive regard. Thus, presence relies largely on the person of the therapist. In addition to the facilitative conditions described by Rogers, Atkins draws on recent research by Geller and Greenberg (2012) to support the practice of presence in EXA. The authors describe presence as a mindful state of being physically, emotionally, cognitively, and spiritually in the moment throughout the therapeutic encounter. Their working, three-domain model suggests presence begins with preparation, or preparing the ground for the therapeutic encounter. The process of presence is then brought into the session and practiced by the therapist, and this presence is then experienced by the client. Research by Geller and Greenberg supports the role of presence in creating a strong working alliance and in facilitating postive change. Atkins describes experiential presence as a dynamic "call and response" (p. 62) between the therapist and the client, a practice of listening and responding that comes from being attracted to and affected by the changing moment-to-moment reality of the therapeutic encounter. Thus the ability to provide experiential presence relies on presence as a way of being.

Atkins (2014) suggests that presence as a personal way of being is characterized by multileveled awareness, multifold openness, and appreciative curiosity. Multileveled awareness includes the therapist's attention to multiple aspects of experience (i.e., cognitive, emotional, sensory, somatic) in herself, the other, the space in-between, and the emerging artwork and artmaking process. This type of attention relies on the integrity and congruence of the therapist, setting the stage for confidence and trust but holding

space for surprise and change. Atkins decribes multifold openness as a non-judgemental, welcoming stance toward the experience of both the client, oneself, and the artwork that emerges in session. From this place of inquiry, the therapist holds space for multiple perspectives and new possibilities. Appreciative curiosity, according to Atkins, conveys genuine interest and excitement on the the part of the therapist, which engenders hope and creates a safe environment for self-exploration. From a place of appreciative curiosity, responding to artwork begins with rich description before moving into exploring associations and meanings. Such a stance avoids quick interpretations.

Presence as a way of being supports experiential presence in the therapetuic encounter (Atkins, 2014). The artmaking process and the artwork itself are held by this presence and treated with the same care and respect as the client. The therapist views artwork as both a reflection and extension of the client. Intermodal art work encourages both the therapist and the client to open to the senses and to imagination, to pay attention in a new way, and to expand our ways of knowing and understanding beyond the limits of linear, rational, and deterministic thought. Thus, artmaking itself becomes a practice of presence.

The type of presence described by Atkins (2014) requires intentional cultivation by the therapist. Through ongoing daily practices (i.e., spending time in nature, mindfulness practices, art-making practices), for example, the therapist can center and ground herself and practice self-care. These rituals are intentionally practiced more days than not and become the source for practicing presence as a way of being. Daily practices can be integrated into openings and closings of individual and group therapy sessions for the same purposes of grounding, centering, self-care, and cultivating

attention and presence.

Process. Eberhart (2014a) articulates systems theory as the theoretical basis for a process-orientation in EAT. From a systems perspective, which recognizes the complexity and interconnection of all things, human beings constantly seek to create order out of chaos through bringing meaning and understanding to experience. Language has traditionally been the primary mechanism through which experience is ordered, understood, and given meaning. The linearity of language, however, can create constriction and reduce the range of possible interpretations and ways of responding or behaving in the world. Over time, such constriction can create entrenched, dysfunctional, or ineffective patterns of ordering experience. In contrast to cognitive-linguistic approaches to ordering complexity, the process of art-making and concrete, rich, sensory-based language can offer new possibilities for ordering and bringing meaning, manageability, and understanding to experience.

Eberhart (2014a) suggests referring to art making as "doing something else" (p. 80) both to avoid negative connotations with the words art and creativity and to mark movement into a new space. Movement into this liminal or threshold space is facilitated by engagement in low-skill, high sensitivity experiences (Knill et al., 2005), which are accessible to anyone, not just artists or creative types. Low-skill, high sensitivity intermodal art-making experiences engage the senses and are interesting and complex enough to be meaningful, to require presence, and to engage a different state of consciousness (Atkins & Eberhart, 2014). In this liminal or threshold space, old patterns of thinking and behaving become unimportant, as the focus of attention and awareness moves toward the present and beyond the self, accessing something more universal that

may be referred to as spirit or soul. Presence in art-making relies on improvisation, trust of the process, belief in client's internal resources for healing and growth, and a safe therapeutic container that can hold the surprises and new insights that emerge. Such an approach stands in stark contrast to manualized therapies, but paradoxically, stucture can be crafted to support process-oriented work with clients.

Eberhart (2002) and Knill et al. (2005) outline a process-oriented structure for EXA work: (a) Personal preparation: therapist engages in personal grounding, embraces a cooperative resource-based attitude, and prepares the therapeutic space; (b) Beginning: period of tuning-in, warming up, and opening the space; (c) Filling in: clarifying the situation and desired change; (d) Decentering: moving away from the issue and into the art; (d) Harvesting: connecting insights and associations from art-making with presenting concerns and implications for everyday life; (e) Closing: reviewing the session and planning for next meeting and time between sessions. Permeating the process-orientation of EXA, are individual attitudinal requirements of the therapist such as playfulness, trust, courage, and curiosity. These attitudes invite surprises, welcome imagination as an ally for growth, and open to the wisdom of the emergent "third" (Eberhart & Atkins, 2014, p. 116) of the art which brings forth the client's often forgotten or neglected internal resources for healing and growth.

The model used in this study has been guided by the principles of presence and process in EAT, as described by Eberhart and Atkins (2014). The structural boundaries of this model included the facilitation of two expressive arts group therapy sessions per week for four weeks. These eight sessions were developed to support positive group development, to promote spiritual daily practices to increase DSEs, and to strengthen

group members' SOC. The following sections outline the process-orientated structure of the sessions themselves as well as the overarching structure of the model as a whole.

The GRACE Model

The process-oriented model of expressive arts group therapy described here was developed by the researcher and the committee chair drawing on the work of Atkins and Eberhart (2014) and the researcher's education and training provided by the Appalachian Expressive Arts Collective (2003). The following processes, which collectively spell the acronym GRACE, have been intentionally integrated into the model based on evidence from the addictions and EXA literature: (a) **G**rounding; (b) **R**eflection; (c) **A**rts Immersion; (d) **C**onnection; and, (e) **E**xpression. Each component of this model will be described in more detail in the following sections.

Grounding. Grounding practices in expressive arts serve to center the attention, to quiet the mind and bring one into the present, and to open the therapeutic space (Atkins, 2014). Meditative daily practices also serve as a spiritual resource for combating the effects of stress and for maintaining equanimity despite life's challenges. Meditation is an essential component in Mindfulness Based Relapse Prevention (MBRP; Bowen, Chawla & Marlatt, 2010), an aftercare model for supporting maintenance of substance abuse treatment gains.

Women in recovery often struggle with shame, anger, and other intra- and interpersonal emotions which serve as barriers to healing and triggers for relapse (Hagens, 2011; Johnson, 1990; Wilson, 2003). In order to strengthen participants' spiritual resources for recovery and emotional well-being, each session began with a loving-kindness meditation as described by Salzberg (1995), a practice which enhances

feelings of compassion and kindness for self and others through the use of positive statements of intent. Loving-kindness meditation has been linked with reductions in symptoms of PTSD and depression and with increases in mindfulness and self-compassion (Kearney et al., 2013). The loving kindness practice for this group began with coming quietly to a comfortable sitting position, closing the eyes if desired, and paying attention to the breath. Next participants were asked to envision themselves in a place where they felt completely safe. From this place, participants were asked to bring their attention to the heart area and to allow an image or feeling associated with kindness, caring, healing, or soothing to arise. Participants were then asked to gently repeat the loving-kindness phrases to themselves. The following progression was used: (a) Week 1: Loving kindness toward self (b) Week 2: Loving kindness toward self and a sober friend or support; (c) Week 3: Loving kindness toward self, a sober friend or support, and a neutral person; (d) Week 4: Loving kindness toward self, a sober friend or support, a neutral person, and a difficult person. Following the grounding loving-kindness meditation, participants moved into reflective writing.

Reflection. Each woman in the EXA group received a journal and an art portfolio at the at the first session, which served as a container for reflective and therapeutic work throughout the duration of the intervention. Reflective practices provide an opportunity for tuning into one's own wisdom and internal resources for healing. According to the Adams (1990), therapeutic journal writing is the purposeful and intentional use of reflective writing to further mental, physical, emotional, and spiritual health and wellness. It is both a creative and therapeutic practice, focused on process rather than product. Therapeutic writing and journaling, in particular, can support clients in (a)

gaining insight, understanding, clarity, and self-awareness; (b) identifying, expressing, and regulating emotions; (c) engaging more fully in treatment; and (d) taking responsibility for personal growth (Adams, 1999; Pennebaker, 1997; Henderson et al., 2007; Thompson, 2004; Thompson, 2011).

For the purposes of this group, writing prompts were structured to support clients in reflecting on self and recovery. This practice focused the content of the sessions, which were structured to promote components of SOC. Writing prompts moved from directive and structured (e.g., sentence stems, listing) to more open-ended over time (e.g., springboards, dialogues). This progression followed the principles outlined by Adam's (1998) Journal Ladder, which provides a developmental continuum of journal techniques that foster safety for vulnerable clients. Alternative prompts for visual reflection were also be given as needed to address learning differences.

Arts Immersion. Following the reflective writing practice, sessions moved into the arts. In contrast to the practice of decentering, as described by Eberhart (2014b), art-making focused on exploring and strengthening the components of SOC. The rationale for using a more structured arts-immersion experience was to both intentionally target clients' sense of meaning, manageabilty, and comprehensibility and to create safety by using a developmental approach to the arts.

Specifically, the integration of the arts moved from more controlled, resistive media (e.g., colored pencils) to more expressive, fluid media (e.g., paint) over time as reflected in the Expressive Therapies Continuum (Hinz, 2009). The intention of this structure was to build confidence, create safety, and to open group members to more expressive modes over time. In session 3, for instance, participants used colored pencils

to create meaning-mandalas, which expressed their motivation for recovery. In session 5, participants used clay to explore, understand, and transform challenges to recovery. In session 7, participants used paint to illustrate internal and external resources for recovery.

Connection. Next, participants connected with their art-work, themselves, and one another to harvest and witness the wisdom, insight, or new understanding that may emerge from engaging with the arts. Participants were explicitly taught how to respond to art in ways that witness, honor, and expand the art. In contrast to approaches that interpret, evaluate or analyze artwork, EXA practices such as aesthetic description, image dialogue, giving the work a title, or responding to art with art (Knill et al., 1995; McNiff, 2009) were utilized. In session 1, for instance, participants practiced using "I see," "I feel," or "I imagine" statements (Halprin, 2002) during the connection phase of the group process. In later sessions, connection included melding participants' responses into a group poem and responding to art with a gesture.

It was expected that women would experience surprises, insight, shifts in perspective, and a sense of being seen and understood through these connection practices. Additionally, group cohesion, trust, and safety were expected to increase. Within the safe container of the group, the researcher anticipated that the women would explore more deeply, take risks, and internalize the resources revealed through arts immersion and witnessed through the practice of connection.

Expression. At the conclusion of each session, the women were asked "What is your recovery intention from our session today?" Each woman selected a recovery bead, verbally expressed her intention, and added the bead to a cord attached to her journal. Group members chose a phrase ("We're in this together") and spoke it in unison after all

intentions were spoken. This ritual served as a closing for each session.

The researcher expected that writing the recovery intention, marking it with a bead, speaking it into the circle, and sealing it with an in unison group response would support participants with mobilizing the resources gained through the expressive arts session. Furthermore, the closing ritual was intended to empower participants to take ownership of their recovery within a supportive community of women who were witnessing one another's intentions. This practice was expected to raise consciousness and to open the door for the women to ask for support with their intentions from peers or staff between groups.

Developmental Considerations and Therapeutic Intent

Initial stage. Theory and practice of group psychotherapy recognizes that groups, like individuals, go through a developmental process (Yalom, 1995). During the beginning or formative stage of group development, group members are likely to be tentative, to check out other group members, and to evaluate how comfortable they are sharing (Corey, Corey, & Corey, 2010). Establishing safety, group norms, and the purpose of the group are important tasks during this stage.

As such, the first session of the treatment group provided an introduction and orientation to the purpose and process of the group. Group members worked collaboratively to establish group rules (e.g., confidentiality), which served to foster a sense of trust and safety for the group moving forward. These rules were posted in the group room throughout the duration of the intervention.

Art-immersion during the first session was intended to introduce clients to the practice of EXA using a structured art-making experience (Envelope of Self), which

afforded participants' significant control in both expression and self-disclosure.

Participants were instructed to depict what they are projecting to the world on the outside

of the envelope and what they are keeping hidden from the world on the inside of the

envelope. They had a range of materials available to them including colored pencils,

markers, and magazines for images and words. These resistive media are noted by Hinz

(2009) to evoke cognitive processes, which were safer for participants during this initial

session. Hinz suggests that the symbolic component on this level of the Expressive

Therapies Continuum (ETC) opens the possibilities of learning about and integrating

previously disowned or unknown parts of the self, which is congruent with the

therapeutic intent of this arts-immersion experience.

Reflection during this phase was descriptive in nature and focused on listing and

writing "I am" poems. Alschuler (2009) provided evidence that using poetry with

addicted populations offers many benefits including: (a) countering resistance by

supporting individuals in turning to face addiction, (b) instilling hope, (c) supporting

movement through the stages of change, (d) giving voice to what has been silenced and

caused shame, (e) promoting self-expression and catharsis, and (e) transforming suffering

and pain. Because the women already knew one another well and were familiar with the

researcher through observations conducted in the months leading up to the group, it was

expected that the group would enter the transition stage by the second session.

Transition stage. Anxiety and various forms of self-protective or defensive

behaviors generally characterize the transition stage of group development (Corey et al.,

2010). It was expected that participants might struggle between playing it safe and taking

risks during this stage. The arts immersion experiences throughout the group, however,

were designed to be "low skill/high sensitivity" (Atkins & Eberhart, 2014, p. 36), in order

to promote appropriate risk taking. Additionally, it was expected that the women might

be concerned with how others view their art or what others think of them. EXA

connection practices, however, were practiced to minimize the fear of evaluative or

interpretive responses from other group members.

It was expected that the group would be in the transition stages during sessions 2

and 3. The therapeutic intent of these sessions was to strengthen participants' sense of

meaning, which provides motivation for moving through the challenges of recovery. In

session 2, participants self-selected a song that provides motivation for recovery.

Heierscheit (2009) suggested that the universality of music makes it a culturally

competent modality for use with diverse populations. For substance abusing populations

Heierscheit suggests that music acts as a catalyst for the expression of fragmented human

emotions. Following their song selection, the women reflected in their journals on the

thoughts, feelings, and behaviors related to their recovery that the song evokes in them.

They then created a visual representation of the meaning the song holds for their recovery

and titled their image. The women's recovery songs played in the background during the

art-immersion portion of the session.

Hinz (2009) noted that the healing role of the affective component of the ETC is

the awareness, identification, and expression of emotions. According to Hinz, the

perceptual component of writing and producing an image can promote internal

organization of affective experience and help with soothing and containing emotion,

which is a primary goal of recovery. Additionally, Skaggs (1997) suggested that music

and imagery used together allow those in recovery from substance abuse to view their

lives from different perspectives, to develop self-awareness and trust in themselves, to resolve internal conflicts and alter moods, to create coherent narratives out of chaos, and to employ health coping skills. In an empirical study, Heiderscheit (2005) found that compared to the control group, chemically dependent participants who participated in an intervention of the Bonny Method of Guided Imagery and Music reported improved interpersonal problems, and demonstrated a significant increase in their ability to manage life's challenges and demands based on the SOC scale. Following the visual arts, the group arranged the titles of their work to form a group poem the group's shared meaning and motivation for recovery.

In session 3, participants listed their sources of meaning and motivation for recovery and then created meaning mandalas. In the center, the women depicted their strongest motivation for recovery, with outer layers expressing more distant but still important sources of meaning and motivation. Mandala making is a symbolic component on the ETC (Hinz, 2009). As such, it healing function lies in the formation and mastery of personal symbols, which can be integrated to provide motivation for recovery. Jung (1964) used mandalas with his patients to support with expression and meaning making of both lived and unconscious experience. Mandalas have also been used to support with containment of traumatic experience, and with promoting psychological health and relaxation (Jung, 1964; Henderson et al., 2007). Following the arts-immersion, the women responded to each other's mandala with a gesture and one descriptive feeling word.

Working stage. The group was expected to move into the working stage by session 4. High levels of trust and cohesion characterize this stage of group development.

During this stage, group members were expected to be taking risks, freely interacting, relaxing during art-making, and expressing support and hope for change (Corey et al., 2010). Spontaneous and researcher facilitated linking during this stage were used to support universality among group members and foster cohesion.

The therapeutic intent of sessions 4 and 5 was to strengthen the comprehensibility component of SOC among group members. Session 4 utilized recovery art made by others as a springboard for reflecting on personal challenges and resources for recovery. Participants responded to a non-triggering recovery image through writing and were asked to give the image a voice in order to reflect on the image as it relates to their personal recovery journey.

Santora, Dowell, and Henningfield (2010) noted the valid and complementary role of addiction art to addiction science. Through addiction art, the artists humanize the experience of addiction and recovery. In doing so, they tell stories of pain and confusion, despair, grief, numbness and isolation alongside stories of hope, love, comfort, and connection. These images tell the stories of how addiction entraps the mind, ravages the body, and exiles the spirit and how recovery can heal and offer connection with these lost parts of Self. Through addiction and recovery images the artists open the door to awareness, insight, and self-compassion and pave a road of understanding that can destigmatize addiction. By connecting with existing addiction art, the intention was to support participants in understanding more fully their own experience of addiction and recovery.

Following reflection on recovery art, participants used miniatures to metaphorically represent their own challenges to recovery. Each woman added her

biggest challenge to a group sandtray. Next, the women added a miniature to the group

sandtray to represent a resource that could support them with navigating their biggest

challenge. Group members then arranged the miniatures as desired. Each woman

contributed her voice to creating a co-constructed recovery story of the final sandtray.

Sand tray provides structure, freedom, and psychological safety to promote self-

expression (Garrett, 2013).   As such Garrett (2013) recommends it as an effective

modality for adult clients. Monakes, Garza, Wiesner, and Watts (2011) implemented an

Adlerian-based sand tray therapy intervention with adult male substance abusing clients

and found that the men were able to express non-verbally and symbolically that which

they could not otherwise express. Furthermore, they were able to make connections, gain

insight, and develop recovery directed goals based on their new understanding.

In session 5, participants engaged in free writing to reflect on their holistic

challenges to recovery. Clay was then used to represent a challenge of participants'

choosing. Group members responded to one another's sculptures to gain alternative

perspectives. The women then reshaped their challenge based on their expanded view

and new understanding or added a resource constructed of clay that would make the

challenge manageable. Clay work represents a kinesthetic component on the ETC, with

the healing function of rhythmic motion and energy release. As such, working with clay

has been found effective for reducing negative mood states including state and trait

anxiety (Kimport & Robbins, 2012; Sandmire et al., 2012). For women in recovery, clay

work can facilitate the release of tension that often triggers substance use. Additionally,

the malleable properties of the media support cognitive flexibility, reshaping of

experience, and creating order out of chaos. Richards (2011) states that working with

clay is a centering experience that helps one to work with the tension between structure and freedom. In this balance, Richards notes the role of clay in teaching us how to yield and when.

The therapeutic intent of sessions 6 and 7 were to promote participants' sense of manageability, the third component of SOC. In session 6, participants listed their internal and external challenges and resources for recovery on notecards. Through the therapeutic journal technique of dialogue, clients imagined a conversation between their internal and external challenges and resources for recovery. Participants then enacted and continued these dialogues in small groups, taking on the voice and role of the stated challenge or resource. Dialogue is recommended as a journal technique to integrate parts of the self and for anticipating and preparing for situations that may involve confrontation (Thompson, 2004). Enactment allows for the exploration of existential issues which often ignite and perpetuate addiction, including: (a) the search for meaning that can ground life; (b) acceptance and tolerance of distress and ambiguity; and, (c) exploration existential states of separation, fusion, loneliness, freedom, and death (Gheorghe, 2009). Additionally Gheorghe (2009) underscored the value of drama therapy to allow clients to explore their shadow side, try on new roles, experiment with role transition, and learn to manage the fear and anxiety inherent in these actions. Through techniques such as dialogue, personification, role-play, improvisation, and role reversal, drama therapy provides space to deconstruct the structures supporting the protagonist role of addiction, dis-identify from or externalize addiction, and re-center or reorganize around a sense of meaning.

In session 7, participants responded to a recovery quote that embodied their

strengths and resources for recovery. The women then painted self-portraits and used mixed media to illustrate their internal and external resources for recovery. The women gave the mixed media painting a voice by completing the sentence stem "She is___" for their own and one another's paintings. Responses were arranged individually to create a poem. Women were then invited to share their poems with the group. Paint is considered a fluid media that evokes affective experience (Hinz, 2009). Paint has been used with addicted populations to support self-soothing and the experience of inner calm. The sensory qualities of paint combined with mixed media and written expression related to recovery resources were used to support an integrative arts experience. According to Hinz (2009), such experiences reduce shame, support access to the higher self, foster interdependence on others, and increase self-actualization.

Termination stage. Session 8 was dedicated to termination. During this final stage of group development, it was important to support group members in processing feelings related to the group adjourning and in expressing their fears, hopes, and concerns for themselves and one another moving forward (Corey et al., 2010). Additionally, termination was used to support members in consolidating and generalizing treatment gains.

In session 8, group members a mandala of circles depicting the three components of SOC, with meaning at the center, resources in the outer circles, and challenges outside the mandala was used as a prompt to support self-reflection. Participants engaged in free writing to reflect on their sources of meaning and motivation for recovery, the nature of the challenges they face, and the resources they bring to manage those challenges. During arts immersion, women created vision boards to support their recovery using

collage materials. Visualization and collage are recommended to support with concretizing goals, increasing motivation, expressing meaning, and facilitating spiritual connection (Ciornai, 1983). Additionally, these modalities are considered effective in combatting powerless and despair and in instilling hope. The boards were added to member's portfolios and shared with the group who responded using EXA connection practices. The researcher gave graduating members of the group a bead that was symbolic of their work in the group.

<div align="center">Implications for Counseling</div>

Through a salutogenic, or health promotion, framework this study seeks to contribute to clinical practice, counselor education and training, and multidisciplinary research in the fields of expressive arts and addiction. Currently, there is a dearth of literature documenting interventions intentionally structured to promote SOC and spiritual practices among addicted populations despite their role in predicting treatment retention, abstinence, and survival. The study seeks to fill this gap by implementing an expressive arts group therapy intervention intentionally structured to strengthen SOC and promote spiritual practices for recovery among pregnant, post-partum, and parenting women. Based on the outcomes of this study, clinicians in the field of addictions, counseling, expressive arts, and other helping professions will be able to apply this salutogenic treatment model in similar settings or adapt it for different populations.

Training and education in addictions treatment currently centers on the disease model. This study seeks to expand the existing medical model framework by introducing a salutogenic approach to conceptualizing and treating addiction. In counselor education and training programs, the role of SOC and spiritual practices in recovery could be added

to the curriculum. Students could be encouraged to design their own evidence-supported salutogenic interventions to strengthen these domains and promote positive treatment outcomes. The piloting of such interventions would significantly contribute to the literature base across disciplines.

Despite the strong link between EXA and the theory of salutogenesis, education and training in the expressive arts does not often make this connection. This study provides a model for integrating the practice of EXA within a salutogenic theoretical framework. For EXA students, such a model could provide structure for conceptualizing clinical work and developing effective interventions. Although the expressive arts literature base is growing, it still widely relies on anecdotal evidence, methodologically flawed studies, or experimental studies from other fields (i.e., art therapy and psychology). This quasi-experimental study addresses many of these limitations and provides a model for future quantitative research in the EXA field. Finally, the study seeks to encourage cross-disciplinary research oriented toward conceptualizing, developing, and implementing innovative treatments designed to promote wellness for all people, including the disenfranchised.

Conclusion

The review of related literature presented in this chapter began by examining the prevalence, public health costs, and treatment of substance abuse in the general population and among pregnant, post-partum, and parenting women in particular. The conceptual framework of salutogenesis was then introduced, with a focus on the role of SOC in predicting substance abuse treatment outcomes. Following a review of the empirical SOC literature, the role of spirituality as a resource for recovery and as a

contributor to SOC was discussed. Next, the historical background and theoretical basis of EXA was presented, and related empirical research in mental health and addictions treatment was introduced. Finally, this chapter outlined the treatment model and discussed implications for counseling as they relate to the study. The following chapter will present an overview of the research methodology utilized in this study.

CHAPTER 3: METHODOLOGY

This study assessed the impact of a salutogenic expressive arts group therapy intervention on the Sense of Coherence (SOC; Antonovsky, 1979) and Daily Spiritual Experiences (DSE; Underwood, 2002) of pregnant, post-partum, and parenting women in recovery for substance abuse. SOC reflects one's view of life as meaningful, manageable, and comprehensible and is considered a global orientation influencing one's ability to respond to stressful situations (Lindström & Eriksson, 2005). A strong SOC is predictive of treatment retention (Abramsohn, Peles, Potik, Schreiber, & Adelson, 2009; Andersen & Berg, 2001; Berg & Brevik, 1998), abstinence (Abramsohn et al., 2009; Chen, 2006; Feigin & Sapir, 2005), and survival (Andersen & Berg, 2001; Berg & Brevik, 1998; Fridell & Hesse, 2006) among substance abusing populations.

DSE refers to ordinary spiritual experiences such as gratitude, compassion, awe, and deep inner peace (Underwood and Teresi, 2002). Increases in DSE are associated with reductions in substance use and longer periods of sobriety (Robinson, Cranford, Webb, & Brower, 2007; Robinson, Krentzman, Webb, & Brower, 2011; Zemore & Kaskutas, 2004). This study has sought to contribute to counseling practice, training, and research by introducing a salutogenic framework for promoting positive substance abuse treatment outcomes. Specifically an expressive arts therapy intervention was implemented to strengthen SOC and increase DSE in a vulnerable population of recovering women. The use of expressive arts as a therapeutic intervention is recognized

in the literature as beneficial for an array of mental health and substance abuse problems (Brooke, 2009; Malchiodi, 2013). The substance abuse and expressive arts fields rely widely on the use of groups for their therapeutic benefits (Yalom, 1995; Rogers, 2011). This chapter outlines the research questions, hypotheses, and research design implemented in the study. Additionally, the chapter describes the participants, instrumentation, and data collection and analyses procedures used in the study.

Research Questions

Despite evidence supporting the role of SOC and DSE in promoting positive substance abuse treatment outcomes, there is no known literature documenting non-Twelve-Step Program (TSP) interventions intentionally structured to strengthen or increase these constructs. This study contributes to this gap in the literature by implementing an expressive arts group therapy intervention designed to strengthen SOC and increase ordinary spiritual experiences among pregnant, post-partum, and parenting women. Specifically, the proposed study seeks to address the following research questions:

1. Are there differences in SOC between pregnant, post-partum, and parenting women in substance abuse recovery who participate in an EXA group and women who participate in an active control group, after controlling for pretest SOC scores?

2. Are there differences in DSE between pregnant, post-partum, and parenting women in substance abuse recovery who participate in an EXA group and women who participate in an active control group, after controlling for pretest DSES scores?

Research Hypotheses

There is conflicting evidence in the literature regarding the stability of SOC. Lindström and Eriksson (2005) suggested that SOC can change and develop over the lifespan, but the first decades of life strongly influence how people learn to deal with challenges and stressors. Without intervention, Antonovsky (1993) suggested that the construct appears to be stable over time. Later research suggests this is true for those with a high SOC; however, for those with a low SOC small differences in mean scores are evident over time (Lindström & Eriksson, 2005).

Given the role of SOC in facilitating movement toward health and its emphasis on problem solving, which can be learned, Antonovsky (1996) recommended that research examine SOC as a dependent variable (DV), with interventions structured to strengthen its components of meaning, manageability, and comprehensibility. Antonovsky further suggested that taking part in a serious therapy group or committing to new behavior may strengthen SOC and "create an opening for the beginning of a major change in life circumstances" (p. 16). Lindström and Eriksson (2005) in their review of the literature noted that such interventions are effective in strengthening SOC, at least in the short term, though long-term sustainability of gains in SOC remain unclear. A longitudinal study by Chen (2001), however, found that Israeli inmates who participated in a spiritual program of recovery had significantly higher SOC scores after one year than those who participated in a non-spiritual program of recovery. As such, in response to the first research questions, the author hypothesizes the following:

1. There will be differences in SOC between pregnant, post-partum, and parenting women in substance abuse recovery who participate in an EXA group and

woment who participate in an active control group, after controlling for pretest SOC scores. Specifically, those in the EXA group are expected to have modest but significant improvements in SOC compared with those in the active control group.

The literature suggests that increases in DSE promote positive substance abuse treatment outcomes and are associated with longer periods of sobriety, fewer relapses, and abstinence (Carter, 1998; Robinson et al., 2007; Robinson et al., 2011; Zemore & Kaskutas, 2004). Although the spiritual practices of AA and other TSPs are known to facilitate spiritual change (Brown & Peterson, 1991; Kelly, Stout, Magill, Tonigan, & Pagano, 2011; Roland & Kaskutas, 2002), few studies have intentionally developed interventions to promote non-TSP spiritual change among substance abusing populations. This gap in the literature is addressed by the study, which integrates spiritual practices into the treatment in order to increase DSE among pregnant, post-partum, and parenting women.

Existing research using DSE as a DV suggests that DSEs are amenable to change (Underwood, 2011). As such, the DSES instrument has been used to measure spiritual change over time. In a randomized controlled study, nurses reported higher DSE following a one-day spiritual retreat; these changes remained stable at 6-month follow-up (Bay, Ivy, & Terry, 2010). Likewise, a controlled trial of manualized spiritual guidance among patients with severe substance dependence revealed a trend of increasing DSE, with gains remaining stable at six-month follow-up (Miller, Forcehimes, O'Leary, & LaNoue, 2008). Given the role of spiritual practices in facilitating spiritual change, the author proposes the following hypothesis for the second research question:

2. There will be differences in DSE between pregnant, post-partum, and parenting women in substance abuse recovery who participate in an EXA group and whome who particpate in an active control group, after controlling for pretest DSES scores. Specifically, those in the EXA group are expected to have modest but significant increases in DSE compared with those in the active control group.

The following sections will discuss the research methodology developed to test the stated hypotheses.

<div align="center">Research Method</div>

Research Design

This study utilizes a quantitative research methodology carried out through a quasi-experimental pretest-posttest active control group design. A quasi-experimental design was required because random assignment to groups was not possible. Due to the use of non-equivalent intact groups, statistical methods were used to control for differences in pretest scores. Hypothesis 1 was tested using an *Analysis of Covariance* (ANCOVA; Tabachnick & Fidell, 2007) to examine posttest differences in SOC scores between the treatment and active control groups, after controlling for SOC pretest scores. Hypothesis 2 was tested using a second ANCOVA to examine posttest differences in DSES scores between the treatment and active control groups, after controlling for DSES pretest scores. These statistical procedures will be discussed further in the data analysis section. The DVs are posttest SOC and DSES scores, the covariates (CVs) are pretest SOC and DSES scores, and the independent variable (IV) is the expressive arts group therapy treatment.

Participants

 This research used a convenience sample of 24 participants recruited from a gender-specific substance abuse treatment facility for pregnant, post-partum, and parenting women located in Charlotte, NC. This site provided consent for the research to be conducted at their facility. IRB approval from the University of North Carolina at Charlotte (UNCC) was obtained by the researcher.

 The research site provides a continuum of substance abuse treatment programming for women who (a) reside at the program's residential facility, (b) are recommended for Substance Abuse Comprehensive Outpatient Treatment (SACOT) services, or (c) are recommended for Substance Abuse Intensive Outpatient Treatment (SAIOP) services. Levels of treatment include the following: *Reaching for Recovery* (RFR; Level 1), *Making it Happen* (MIH; Level 2), and *Empowered for Living* (EFL; Level 3). Movement between levels is determined by the following: (a) engagement in treatment (i.e., participation in individual therapy, groups, and activities; progress toward goals; attitude toward recovery); (b) treatment attendance; (c) TSP meeting attendance; (d) working with TSP sponsor; (e) negative drug screens; (f) compliance with treatment and residential rules; and, (g) majority vote of treatment team. The specific nature of each group and requirements of each level will be discussed below.

 Women in the RFR group are in the early stages of recovery and are thus more prone to attrition and relapse, as they may not have accepted their addiction and committed to change. This level is approximately 8 weeks and provides women with the basics to begin their journey toward recovery. At this stage of treatment, the women learn skills to help them cope with alcohol/drug triggers and cravings/urges. In order to

progress to level 2, women in the RFR level must meet the basic requirements for level change and attend 32 full days (128 hours) of treatment including attendance/engagement in the following groups: (a) 16 substance abuse education groups; (b) 24 group therapy sessions; and, (c) 8 each of parent process, parent education, parent activity, DBT, trauma, and relapse prevention groups.

Women who successfully complete the requirements at the RFR level are eligible to progress to the MIH group. Women in this second level of treatment have established connections among their peers and staff, which support them in addressing significant issues impacting their addiction and recovery. At this level, basic skills for managing addiction are enhanced in order to strengthen the women's foundation for recovery and assist them in their growth. In order to progress to level 3, women in the MIH level must continue to meet the basic requirements for level change and attend 48 full days of treatment (192 hours) including attendance/engagement in the following groups: (a) 12 substance abuse education; (b) 36 group therapy; and, (c) 12 each of parent process, parent education, parent activity, DBT, trauma, relapse prevention, job skills, and 16-Steps.

Women who successfully complete the requirements at the MIH level are eligible to progress to the EFL group. Women who reach this third level of treatment have approximately 6 months of clean time and are empowered to begin vocational, educational, and or housing goals. At this level of treatment the women step down from 20 hours of treatment each week to 12 hours in order to facilitate necessary time in the community to meet transitional goals. Additionally women continue to participate in individual and group therapy in order to address issues contributing to and maintaining

addiction, to learn skills to prevent/recovery quickly from a relapse, and to address challenges to remaining drug free. Women recommended for SAIOP services begin treatment at this level. In order to graduate from the research site, women at the EFL level must continue to meet the basic requirements for level change and attend 20 full days (60 hours) of treatment including attendance/engagement in the following groups: (a) 16 group therapy; (b) 8 each of parent process and advanced job skills; and, (c) 4 each of relapse prevention and life skills. Additionally, the women must be working toward obtaining a job or enrolling in school. Women who successfully complete treatment and graduate from the program may elect to participate in the research site's aftercare program, *Sisters Bound for Recovery*. Aftercare is available 2 hours one evening day per week for at least one year post-treatment in order to provide continued support for recovery.

For purposes of this study, women in the MIH and EFL groups served as the recruitment pool for the active control group. These women were at lower risk for attrition and relapse and served as a stable population from which to draw participants for the treatment group. Women in the RFR group served as the recruitment pool for the control group. Participants eligible for inclusion in this study were adult (age 18+) pregnant, post-partum, or parenting women in recovery from substance abuse enrolled in treatment at the research site who (a) were in the RFR, MIH, or EFL groups, and who (b) voluntarily agreed to participate in the research project. All women admitted for treatment at the research site have a primary or co-occurring substance abuse diagnosis, are enrolled in Work First, and are residents of NC. Women who are enrolled in the

research site have been screened out for severe mental health disorders. No further exclusionary criteria were used in this study.

Treatment group. Women in the MIH and EFL levels of treatment were eligible to participate in the active control group. All 12 treatment group participants met as one group for 1.5 hours twice a week for 4 weeks. These groups took place during the regularly scheduled programming at the treatment facility. According to the treatment protocol (see Appendix A), the sessions began with a grounding meditation, followed by reflective writing, arts immersion, connection practices for sharing and responding to art, and concluded with the expression of recovery intentions. The group was structured as follows: (a) Session one will be used as an opening to the group experience; (b) Sessions 2 and 3 will focus on enhancing the meaning component of SOC; (c) Sessions 4 and 5 will focus on enhancing the comprehensibility component of SOC; (d) Sessions 6 and 7 will focus on enhancing the manageability component of SOC; and, (e) Session 8 will be used for closing and termination of the group experience. Morning and afternoon make-up sessions were scheduled once a week for two weeks following the conclusion of the group in order to ensure that all participants completed all 8 sessions of the treatment protocol. All make up sessions had at least four participants, which supported the group process component of treatment.

According to the policy of the research site, a full-time employee must be in the room at all times while the researcher provides the treatment. All sessions included two full time licensed mental health and substance abuse counselors who served as process observers and who took notes on the participation and engagement of the women during the sessions. These staff generally supported women during the reflective writing and

arts immersion portions of treatment and addressed individual needs/behaviors as they

arose (i.e., redirecting women who talked to peers during the writing component,

supporting art exploration and expression when women were stuck). The researcher (a

doctoral level graduate student, licensed mental health counselor, associate licensed

substance abuse counselor, and expressive arts therapist) was in charge of conducting all

activities during group time.

Active control group. Women in the RFR group were eligible to participate in the

study's active control group. This group was oversampled in order to account for the

likelihood of attrition among the women at this first stage of treatment. These 12 women

who completed both pre and post-tests received standard substance abuse treatment as

described above instead of the intervention. Specifically, they participated in a family

process group, therapy which focuses on parenting only, and a relapse prevention group

during the times the treatment group met for the EXA group therapy intervention.

Additionally, like all women at the research site, they continued to attend TSP meetings

and work with their sponsor if they had one, Participants in the active control group were

invited to participate in the expressive arts group therapy intervention at the conclusion of

this study.

Instrumentation

Sense of Coherence Orientation to Life Questionnaire. The SOC-OLQ

(Antonovsky, 1987) is a self-report measure of SOC, a core construct of salutogenic

theory. It is available in a 29-item version and a 13-item version. For purpose of this

study the 13-item version was used due to having stronger psychometric properties

(Unterrainer, Ladenhauf, Wallner-Liebmann, & Fink, 2011). The SOC-OLQ instruments

have been used extensively in health promotion and cross-disciplinary research (e.g., Chen, 2001; Dahlin, Cederblad, Antonovsky, & Hagnell, 1990; Nyamathi, 1991; Poppius, Tenkanen, Hakama, Kalimo, & Pitkanen, 2003). As of 2003, the instrument had been translated into 33 different languages and used in 32 different countries (Eriksson & Lindström, 2005). Normative data is available from many of these international and cross-cultural studies as well from those in the U.S. population across the racial, ethnic, gender, and socio-economic spectrum. As such, it is considered a cross-culturally applicable instrument.

The SOC scale consists of three facets, which together have been linked with salutogenic health outcomes (Antonovsky, 1993). These facets include a sense of meaning, which provides motivation for coping; a sense of manageability that one can access resources and supports for coping; and a sense of comprehensiveness that the world is predictable and can be consistently be understood. A 7-point Likert scale is used for respondents to indicate agreement-disagreement with semantic differential statements. The assessment takes approximately 10 minutes to complete.

Eriksson and Lindström (2005) conducted a comprehensive review of studies published from 1992-2003 using the SOC instruments in order to examine the scales' psychometric properties. In studies using the SOC-13, estimates of internal consistency reliability measured by Chronbach's α ranged from .70-.92. Mean SOC scores ranged from 35.39 to 77.60 (SD = 13.80). Test-retest reliability over the span of one year has been reported to range from .69 to .72. Face validity of the instrument was supported, with participants completing the questions with ease. Regarding construct validity, the authors found that some studies suggest a multidimensional rather than unidimensional

construct. Antonovsky (1993), however, stated that theoretically the factors should not be considered separately as they form a global orientation toward one's inner and outer environments that together significantly influence movement along the wellness-illness, health-disease continuum. As such, Antonovsky recommended research that uses SOC as a DV.

The instrument's criterion validity has been examined through multiple correlation studies with instruments measuring (a) generalized perceptions of self and environment (b) perceived stressors (c) health and well-being, and (d) attitudes and behaviors (Antonovsky, 1993). Most notable are the instrument's strong negative correlation with depression and anxiety and strong positive correlation with self-esteem and optimism (Eriksson & Lindström, 2005). Additionally, a strong SOC has been linked with higher quality of life. The predictive validity of the instrument is high in longitudinal studies with addicted populations (Abramsohn et al., 2009; Feigin & Sapir, 2005; Fridell & Hesse, 2006).

The Daily Spiritual Experiences Scale. The DSES (Underwood & Teresi, 2002) is a 16-item self-report measure designed to assess ordinary spiritual experiences in daily life, such as awe, inspiration, gratitude, deep inner peace, mercy, connection with the transcendent, and compassionate love. It is important to note that the scale measures feelings and sensations rather than cognitive beliefs or attitudes (Underwood, 2011). The first 15 items of the questionnaire are measured on a 6-point Likert-type scale: many times a day, every day, most days, some days, once in a while, and never or almost never. Item 16 is measured on a 4-point scale: Not Close at All, Somewhat Close, Very Close, As Close as Possible. The scale takes approximately 5 minutes to complete.

The DSES was developed through extensive qualitative testing with diverse groups using an overlapping circles model of religion/spirituality (Underwood, 2011). As such, the scale incorporates items that use theistic language and items that are more spiritual in nature. For example, the introduction to the DSES states, "A number of items use the word God. If this word is not a comfortable one for you, please substitute another idea which calls to mind the divine or holy for you." (p. 32). The word 'spirituality' is used in this scale to refer to a personal sense of the transcendent, divine or holy, "more than" (p. 30) what we can see or touch or hear. Since its development, the DSES has been translated into 20 languages and employed effectively in a variety of cultures. Although initially used in health studies, the DSES is now utilized extensively in cross-disciplinary research in the U.S. and internationally, including in counseling settings and with substance abusing populations (Underwood, 2011).

The DSES evidenced good reliability across several studies with internal consistency estimates ranging from $\alpha = .94 - .95$ (Underwood & Teresi, 2002). Most items were moderately to highly intercorrelated (.60 - .80). Exploratory factor analysis suggests the DSES measures a unidimensional construct. Construct validity has been established in multiple studies, with the DSES correlating in the predicted direction with health and quality of life variables as well as along socio-demographic lines. Specifically, African Americans reported more DSEs than Whites, and females reported more DSEs than males. Additionally, more frequent DSEs were positively correlated with social support, optimism, and positive affect; negative correlations were observed with anxiety, depression, and daily alcohol intake. These results have lead to further studies investigating the role of DSEs in buffering against the stresses and strains of daily

life. Such studies with substance abuse have been conducted based on the hypothesis that

DSEs create an internal environment in which alcohol is not needed.

Underwood (2011) suggested that the DSES be used not only to improve health

and quality of life outcomes but also as an outcome in its own right. Such studies, the

author contended, are needed to develop attitudes, behaviors, practices, and interventions

to that address real human concerns. The author encouraged the development of

practices that promote DSEs, which are linked to a range of salutogenic outcomes,

including those in the addiction field.

Data Collection Procedure

The program supervisor at the research site provided written permission for the

researcher to conduct the proposed study at the site. Participants were recruited with the

support of a substance abuse counselor who acted as the site liaison. Women from the

RFR, MIH, and EFL groups met with the researcher and the liaison during a regularly

scheduled community meeting. During this meeting, the women were informed of the

nature of the study, as well as its potential risks and benefits. Eligible women were

invited to participate in the study, and those who chose to do so indicated their voluntary

participation by signing the informed consent form (See Appendix B).

After obtaining informed consent, data collection took place at the research site,

with each woman having private space to complete the pre-test data collection packet.

Participants completed a demographic questionnaire (see Appendix C) indicating their

age, race, gender identity, sexual orientation, living situation, relationship status, family

information, agency involvement, educational background, employment status, substance

use and mental health history, and religious/spiritual involvement. Specific demographic

items were based on correlates to substance abuse for women identified in the literature. This information was used for descriptive purposes only. Participants then completed the SOC-13 (Antonovsky, 1987) and the DSES (Underwood & Teresi, 2002) pretests. Posttest data from the experimental group was collected following completion of all 8 group sessions. Posttest data from the control group was collected during the same week that the experimental group participants ended treatment. Women in the control group met privately with the researcher at a pre-determined time to complete posttest assessments.

Collected data was stored in a locked file box that was kept in the director's office at the resaerch site. All data was collected in a manner to ensure participant anonymity. Specifically, the researcher devloped a master list, which contained participants' names with an assigned identification number. During demographic, pretest, and posttest data collection, participants used their assigned number and were instructed to not use their assigned names on the assessments. Consent forms, which had participants' signatures, and the master list, which paired participants' names with their assigned identification number, were kept in a separate lock box in the director's office at the research site. After post-data collection, the master list was destroyed. At that time all of the data was anonymous, and the only identification of participants was their identification number. The investigator followed the American Counseling Association Code of Ethics regarding confidentiality as well as the guidelines for human subjects research.

Data Analysis

The collected data was input into the Statistical Package for the Social Sciences (SPSS) software. Prior to conducting the major analyses, data was screened for missing

values, univariate outliers, and normality according to recommendations by Tabachnik and Fidell (2007). Missing values and outliers were inspected both visually and by constructing box plots. The assumption of normality were tested by examining a histogram to determine if the population is normally distributed. Additionally, skewness values were examined to ensure that all values are less than the absolute value of 1.0. The assumption of homogeneity of variances were examined using Levene's (1960) test. A non-significant value ($p > .05$) would indicate that this assumption was tenable. The assumption of linearity was determined by correlating the DV and CV. A moderate to strong positive correlation (indicated by r > .4) would indicate that this assumption was met. The assumption of homogeneity of regression was tested by examining the interaction between the grouping conditions and the covariate. A non-significant interaction would indicate that this assumption was tenable. This assumption was met if the slope of the regression lines were parallel. Reliable measurement of the CV was expected based on the psychometric data available for the DSES and SOC-13 scales.

Univariate rather than multivariate statistics were employed in data analysis for this study given the small sample size, Major analysis was conducted using an ANCOVA test. According to Tabachnick and Fidell (2007), one purpose of this statistical analysis is to examine mean differences between groups after adjusting for pre-existing differences on the CV, which the authors define as variables that are measured before the DV and are associated with it (p. 195). This use of the ANCOVA test is common in quasi-experimental designs where random assignment to groups is not possible. In essence, it allows for differences between subjects on the covariate to be removed so that the only differences between groups that remain are attributable to the

effects of the treatment. It is important to note that causality cannot be assumed based on this analysis.

For the purposes of this study, the CVs were pretest DSES and SOC scores. These scores were adjusted for since pre-existing group differences were expected. This adjustment allowed the researcher to assess the impact of the IV (EXA intervention), on the DVs of postest DSES and SOC scores as if the groups scored the same on pre-test scores. This statistical procedure allowed comparison between non-equivalent groups on the DV.

Specifically, hypothesis 1 was examined through an ANCOVA to assess posttest differences in SOC scores between the treatment and active control groups, after controlling for SOC pretest scores. Hypothesis 2 was examined using a second ANCOVA to assess posttest differences in DSES scores between the treatment and active control groups, after controlling for DSES pretest scores. One-tailed tests were used to provide more power to detect an effect in the predicted direction. The proposed hypotheses were supported (and the null hypotheses rejected) if p-values were less than .05.

<div align="center">Conclusion</div>

Chapter Three has provided an introduction to the methodology implemented for the study designed to investigate the impact of a salutogenic expressive arts group therapy intervention on the SOC and DSE of pregnant, post-partum, and parenting women in recovery for substance abuse. The chapter began with an introduction to the research questions and hypotheses and was followed by an explication of research methods. The research design, participants, instrumentation, and data collection and

analysis procedures were outlined in order to illustrate how the proposed study will be

carried out. The following chapter will summarize the results of the study.

CHAPTER 4: RESULTS

The purpose of this study was to assess the effectiveness of a salutogenic
expressive arts (EXA) intervention intentionally structured to strengthen internal
resources for recovery among pregnant, post-partum, and parenting women in substance
abuse treatment. Specifically, this study sought to strengthen Sense of Coherence (SOC)
and increase Daily Spiritual Experiences (DSE) among treatment group participants. The
effectiveness of this intervention was assessed by comparing treatment group outcome
measures with those outcomes of women enrolled in an active control group. Due to the
use of intact groups at varying levels of treatment, this study uses a nonequivalent
pretest/posttest group design.

This study examined two research questions. The first question asked if there
were differences in SOC between pregnant, post-partum, and parenting women in
substance abuse recovery who participated in an EXA group and those who participated
in an active control group, after controlling for pretest SOC scores. The second question
asked if there were differences in DSE between pregnant, post-partum, and parenting
women in substance abuse recovery who participated in an EXA group and those who
participated in an active control group, after controlling for Daily Spiritual Experiences
Scale (DSES) pre-test scores. The following section will provide a thorough description
of participants enrolled in the study.

Description of Participants

Volunteers from a clinical population of pregnant, post-partum, and parenting women at a gender-specific substance abuse treatment facility in the Southeastern United States served as the target population for this study. A convenience sample of 24 women from two intact groups was chosen to participate in this study. Twelve women from the entry-level intact group served as the final active control group. This group was initially oversampled ($n = 17$) due to high attrition common in the early stages of substance abuse treatment. Three women left treatment against medical advice (AMA) and did not complete post-test measures, and two women were excluded from analysis because they had not been enrolled in treatment for at least one week prior to initial data collection. Pretest scores of the women who dropped out of treatment were not significantly different from those who remained in treatment. Twelve women pooled from the intact level 2 and 3 groups served as the treatment group. Women in these levels were stabilized in treatment, in sustained recovery, and presented a low risk for attrition.

Individual Characteristics

The researcher examined the survey results for any outliers and there were none. Individual characteristics of participants are summarized in Table 1. Participants in the treatment group ranged in age from 24 to 35 years of age, with the majority ($n = 9$) between 30 and 35 years old. The age spread among active control group participants was wider, ranging from 22 to 43 years of age. The majority of participants in the control group ($n = 8$) were White, with three Black, and one bi-racial participant. In contrast, half of the treatment group participants were White, four were Black, and the remaining two identified as Native American or mixed ethnicity respectively. In the treatment

group, only one woman identified as bisexual with the remaining identifying as

heterosexual. In the control group, however, only half of the participants identified as

heterosexual, with five identifying as bisexual and one as gay. About half of the

participants were in a relationship, including marriage, ($n = 13$) and about half ($n = 11$)

were single, including divorce. For both the treatment and active control groups, the

majority of the women ($n = 22$) lived at the treatment center's residential facility. The

majority of participants in both the treatment and active control groups completed high

school or equivalency requirements, with one third of participants in each group having

some college experience. All women in the sample were unemployed.

TABLE 1: Individual characteristics by group

	Treatment ($n = 12$)	Active Control ($n = 12$)	Total ($N = 24$)
Gender			
Female	12	12	24
Race			
White	6	8	14
Black	4	3	7
Native American	1	0	1
Bi-racial/mixed ethnicity	1	1	2
Hispanic/Latino	0	0	0
Age			
18-23	0	2	2
24-29	3	3	6
30-35	9	3	12
36-41	0	3	3
42-47	0	1	1
Sexual Orientation			
heterosexual	11	6	17
homosexual	0	1	1
bisexual	1	5	6

Relationship Status			
Single	5	4	9
In a relationship	5	5	10
Married	1	2	3
Separated	0	0	0
Divorced	1	1	2
Living Situation			
Community, alone	0	0	0
Community, with others	1	0	1
Shelter	0	1	1
Homeless	1	0	1
Treatment center	11	11	22
Education			
Some highschool	5	4	9
Highschool diploma	1	0	1
GED	2	4	6
Some College	4	4	8
College Degree	0	0	0
Employment Status			
Unemployed	12	12	12

Maternal Characteristics

Maternal characteristics of study participants are summarized in Table 2. One woman in the treatment group was pregnant and had her child during the course of the intervention. Four women in the active control group were pregnant with one also giving birth during the course of the intervention. The majority of the women in the treatment group had three to four children ($n = 7$). In contrast, the majority of the women in the active control group had between one and two children ($n = 8$), though two participants had five or more children. While the majority of women in the active control group had custody of all children ($n = 7$), the majority of women in the treatment group ($n = 8$) did not have custody of all children. In the treatment group, children's ages ranged from birth to 12 years old, and in the active control group from birth to 20 years old.

TABLE 2: Maternal characteristics by group

	Treatment (n = 12)	Active Control (n = 12)	Total (N = 24)
Pregnant	1	4	5
Number of Children			
1-2	5	8	13
3-4	7	2	9
5-6	0	1	1
7-8	0	1	1
Custody of All Children			
yes	4	7	11
no	8	5	13

Agency Involvement

Many of the women in the study had multiple agency involvement that impacted engagement with treatment (see Table 3). Two-thirds of the women in both the treatment and active control groups had social service involvement, mainly due to their substance use. Half of the women in the active control group and three-quarters of women in the treatment group had legal involvement resulting in probation or parole. Women who specified their reason for legal involvement indicated larceny or drug related charges. About half of the women in the study ($n = 13$) were mandated to participate in comprehensive substance abuse treatment by one or more agencies.

TABLE 3: Agency involvement by group

	Treatment (n = 12)	Active Control (n = 12)	Total (N = 24)
DSS/YFS			
yes	8	8	16
no	4	4	8

Probation/Parole			
yes	9	6	15
no	3	6	9
Mandated to treatment			
yes	6	7	13
no	6	5	11

Substance Use and Recovery Characteristics

Substance use and recovery related characteristics of participants are summarized in Table 4. The primary substance of abuse among participants was heroine/opiates ($n =$ 9). While one-third of treatment group participants indicated alcohol as their primary substance of abuse, none of active control group participants did. Among those in both groups who indicated polysubstance abuse, however, alcohol was indicated.   One woman in the treatment group indicated methamphetamine and two women in the active control group indicated crack/cocaine as their primary substance of abuse. The remaining participants in both groups ($n =$5) indicated marijuana as their primary substance of abuse. Only one woman in each group participated in Methadone Maintenance Treatment (MMT). All women in the study identified having a sober support system and participating in Twelve-Step Programs (TSP) by attending an average of four meetings per week.   While all treatment group participants identified a TSP sponsor, only 7 women in the active control group had one. Clean time among treatment group participants ranged from 4 to more than 12 months with more participants ($n = 5$) clustering in the 6-7 month range. Clean time among active control group participants ranged from less than one month to 10 months, with the majority of participants ($n = 8$) clustering in the 2-3 month range. More than half of the women in each group acknowledged a co-occurring mental health disorder.

TABLE 4: Substance abuse and recovery characteristics by group

	Treatment (*n* = 12)	Active Control (*n* = 12)	Total (*N* = 24)
Primary Substance of Abuse			
Heroine/opiates	4	5	9
Crack/cocaine	0	2	2
Methamphetamine	1	0	1
Marijuana	2	3	5
Alcohol	4	0	4
Poly-substance	1	2	3
Methadone Maintenance Tx			
yes	1	1	2
no	11	11	22
Sober Support System			
yes	12	12	24
no	0	0	0
Clean Time			
< 1 month	0	1	1
2 – 3 months	0	8	8
4 – 5 months	2	2	4
6 – 7 months	5	0	5
8 – 9 months	2	0	2
10 – 11 months	2	1	3
12 + months	1	0	1
Twelve-Step Participation			
yes	12	12	24
no	0	0	0
Twelve-Step Sponsor			
yes	12	7	19
no	0	5	5
Co-occurring MH Dx			
yes	7	7	14
no	5	5	10

Religious and Spiritual Characteristics

Religious and spiritual characteristics of participants are summarized in Table 5. The majority of participants in the study ($n = 21$) claimed a religious affiliation, with most identifying as Christian. While three-quarters of the women in the treatment group indicated active religious/spiritual involvement, only one-third of the active control group participants were actively involved in their spiritual or religious community. Many of the actively involved participants indicated daily spiritual practices such as meditation, prayer, reading the Bible, or attending TSP meetings. Despite less involvement among active control group participants, 9 out 12 stated that spiritual concerns were very important to them in their recovery. All participants in the treatment group indicated the importance of spiritual concerns in their recovery.

TABLE 5: Religiosity/spirituality by group.

	Treatment ($n = 12$)	Active Control ($n = 12$)	Total ($N = 24$)
Religious Affiliation			
yes	11	10	21
no	1	2	3
Religious/Spiritual Involvement			
None	0	2	2
Some/irregular	3	6	9
Active	9	4	13
Importance of Spiritual Concerns			
Not important	0	0	0
Somewhat Important	0	3	3
Very Important	12	12	24

Statistical Procedures

Group Differences

In addition to differences on categorical variables described in the section above,

statistical differences between groups on pre-test measures were assessed before

conducting the major analysis. Specifically, an independent samples t-test was run in

order to assess for differences between the treatment and active control groups on SOC

and DSES pretest measures. The assumption of homogeneous variances was satisfied for

both DSES pretest scores (Levene's test, $F = 1.88$, $p = .184$) and SOC prestest scores

(Levene's test, $F = 2.84$, $p = .106$). Table 6 presents the means and standard deviations by

group.

TABLE 6: Pretest means and standard deviations by group

	Pre-test SOC		Pre-test DSES	
Group	M	SD	M	SD
Treatment	4.44	.60	5.29	.86
Control	4.25	.90	4.86	1.29

The results show that there were no significant differences between groups on the

DSES pretest measure $t_{(.05, 22)} = .18$, $p = .35$. Likewise, there were no significant

differences between mean SOC pretest scores for the treatment and active control groups

$t_{(.05, 22)} = .60$, $p = .56$. Given these results, two separate Analysis of Covariance tests were

run in order to test the hypotheses the two major research questions. Univariate statistics

were required due to the small sample size.   The results of the major analyses are

presented below.

Sense of Coherence

Data screening and assumptions. Prior to conducting the major analysis, the SOC

data was screened for missing data, outliers, and normality. There was no missing data.

There were two outliers in the treatment group who had a lower than average SOC

resulting in a negatively skewed distribution for pretest SOC scores (sk = -1.62);

however, these outliers were maintained in the analysis to reflect the variability of SOC

among women in the treatment group. The remaining distributions were normally

distributed upon a visual inspection of histogram and box plots and skewness values less

than the absolute value of 1.0. The assumption of linearity was tested by correlating the

dependent variable (posttest SOC) with the covariate (prestest SOC) and appeared

tenable based on a strong positive correlation (r = .75). In a test of the interaction

between the grouping conditions and the covariate (i.e., pretest SOC scores), there was

not a statistically significant interaction suggesting that the assumption of homogeneity of

regression lines was tenable, $F_{(1, 24)}$ =.17, p =.68. The assumption of equality of error

variance was satisfied, F = .253, p=.62. Based on data screening and satisfaction of the

assumptions of ANCOVA, the researcher proceeded with the major analysis.

Major analysis. An analysis of covariance (ANCOVA) was used to examine

differences in post-test SOC scores between pregnant, postpartum, and parenting women

in recovery enrolled in an EXA group therapy intervention and women in an active

control group after controlling for pretest SOC scores. Results of the ANCOVA

supported the hypothesis that there were statistically significant differences for the

adjusted posttest SOC mean scores between the groups, $F_{(1, 21)}$ = 7.84, p = .01, *partial*

eta squared = .27. The means and standard deviations for both treatment and control

groups and adjusted means are reported in Table 7.

TABLE 7: Means, standard deviations, and adjusted means by group on SOC

	Pretest SOC		*Posttest SOC*		
Group	*M*	*SD*	*M*	*SD*	Adjusted *M*
Treatment	4.44	.60	5.22	.59	5.15
Control	4.25	.90	4.51	.90	4.59

Daily Spiritual Experience

        Data screening and assumptions. Prior to conducting the second major analysis,

the DSES data was screened for missing data, outliers, and normality. There was no

missing data and no outliers or extreme values. The assumption of normality was

examined by visually inspecting histograms and box plots. The distributions for DSES

were negatively skewed, with values greater than the absolute value of 1.0 for the control

group and values approaching the absolute value of 1.0 for the treatment group. The

assumption of linearity was tested by correlating the dependent variable (posttest DSES)

with the covariate (prestest DSES). This assumption appeared tenable based on a strong

positive correlation ($r = .90$). In a test of the interaction between the grouping conditions

and the covariate (i.e., pretest DSES scores), there was a statistically significant

interaction suggesting that the assumption of homogeneity of regression lines was not

tenable, $F_{(1, 24)} = 20.22$, $p < .01$. The assumption of equality of error variance was

satisfied, $F = 1.11$, $p < .30$. Given the violation of two of the assumptions for

ANCOVA, the major analysis could not be run. Instead, non-parametric statistics were

used to assess for between group differences.

Non-parametric statistics. An independent sample Mann-Whitney U test indicated that there were no significant differences between groups on post-test DSES scores (p = .55). These results did not support the research hypothesis that there would be moderate significant differences between groups on post-test DSES scores after controlling for pretest DSES scores. The means and standard deviations for both treatment and control groups on DSES pre- and posttest measures are reported in Table 8.

TABLE 8: Means and standard deviations by group on DSES

	Pretest DSES		Posttest DSES	
Group	*M*	*SD*	*M*	*SD*
Treatment	5.28	.86	5.66	.37
Control	4.86	1.29	4.98	1.48

Summary

Chapter Four has presented a thorough description of treatment and active control group participants, including individual and maternal characteristics, agency involvement, treatment and recovery characteristics, and spiritual/religious characteristics. There were no statistically significant differences between groups on the dependent variables. Data screening and assumptions for SOC data were satisfied, and the major analysis indicated support for the research hypotheses that the expressive arts group therapy intervention had a statistically significant (p = .01*)* impact on SOC for treatment group participants when compared to those in the active control group. Due to violation of the assumptions of ANCOVA for SOC data, the major analysis could not be run. Non-parametric statistics, however, failed to support the research hypothesis.

Specifically, there were no statistically significant differences between groups on DSES

posttest scores.

CHAPTER 5: DISCUSSION

This study assessed whether a salutogenic expressive arts therapy (EXA) intervention strengthened Sense of Coherence (SOC) and increased Daily Spiritual Experiences (DSE) among pregnant, post-partum, and parenting women in recovery from substance abuse when compared to an active control group. The chapter includes an overview of the study and a discussion of the major findings. Additionally, the study's limitations and recommendations for future research will be discussed.

Rooted in existential, humanistic, and phenomenological traditions, EXA is supported by the literature to promote spirituality, meaning-making, manageability, and understanding of life experience (Appalachian Expressive Arts Collective, 2003; McNiff, 2009; Knill, Levine, & Levine, 2005; Rogers, 1993). Additionally, EXA has been used with diverse populations and in diverse settings to promote positive mental health (Malchiodi, 2013; McNiff, 2009) and substance abuse outcomes (Brooke, 2009). Currently, however, there is very little literature suggesting a salutogenic, or health promoting, approach to the treatment of addiction. Notably absent from the research are interventions structured to strengthen SOC and increase DSE, two salutogenic constructs that promote persistence in treatment, abstinence, and survival among populations in recovery from substance abuse (Andersen & Berg, 2001; Berg, 1996; Chen, 2006; Feigin & Sapir, 2005; Underwood & Teresi, 2002). This study contributes to this gap in the literature by implementing an EXA group intervention designed to strengthen SOC and

increase ordinary spiritual experiences among pregnant, post-partum, and parenting women in recovery from substance abuse.

The researcher recruited participants for the study from a comprehensive gender-specific substance abuse treatment facility for pregnant, post-partum, and parenting women in recovery located in the Southeastern United States. Women in the facility's level one group (early recovery) served as active control group participants ($n = 12$), and women in the facility's level two and three groups (sustained recovery) served as the study's treatment group participants ($n = 12$). Following pretest data collection, the researcher implemented a salutogenic EXA group therapy intervention intentionally structured to strengthen the components of SOC (meaning, manageability, and comprehensibility) and increase DSEs among treatment group participants. Following the intervention, posttest data was collected, and two analyses of covariance (ANCOVA) tests were conducted to assess for differences in SOC and DSE after controlling for pretest scores. Univariate statistics were used due to the study's small sample size ($N = 24$).

The findings indicated that the expressive arts group therapy intervention had a statistically significant impact ($p = .01$) on SOC for treatment group participants when compared to participants in the active control group even after controlling for pretest scores. Due to violating the assumptions of ANCOVA for DSES data, however, the major analysis could not be run. Non-parametric statistics failed to find statistically significant differences between groups on DSES posttest scores; however, treatment group participants did evidence higher mean DSES scores ($M = 5.66$) compared with control group participants ($M = 4.98$). In summary, the results suggest that the EXA

group intervention had a significant impact on SOC but not DSE among treatment group participants when compared to those in the active control group.

<div align="center">Results and Conclusions</div>

Descriptive Findings

Due to the use of intact groups, the researcher gathered extensive descriptive data in order to present a thorough description of participants in both the treatment and active control groups. Specifically, the researcher gathered categorical data on individual and maternal characteristics, agency involvement, treatment and recovery characteristics, and spiritual/religious characteristics. This section will discuss the similarities and differences among participants in light of existing literature. Additionally, the implications of these findings will be discussed with recommendations for future research.

Individual characteristics. The majority of participants in the study were between 24 and 35 years of age ($n = 18$), which was expected given the women's maternal status. Although the literature suggests that women of color are disproportionately screened and diagnosed with substance use disorders (SUDs) and consequently over-represented in treatment (Brady & Ashley, 2005; Haller, Miles, & Dawson, 2003; Havens, Simmons, Shannon, & Hansen, 2009), the majority of participants in this study were White ($n = 14$). Thus, the study's participants reflect documented patterns suggesting that Caucasian pregnant, post-partum, and parenting women have higher rates of use than women of color (Caetano, Ramisetty-Mikler, Floyd, & McGrath, 2006; Kissin, Svikis, Moylan, Haug, & Stitzer, 2004; Perreira & Cortes, 2006).

In addition to race, the heterogeneity of sexual orientation among active control participants compared to treatment group participants warrants further attention. Although 11 out of 12 participants in the treatment group identified as heterosexual with only one participant identifying as bisexual (racial minority), 5 out of 12 participants in the active control group identified as bisexual (all White) and one identified as gay (racial minority). These results seem to support existing literature, which suggests that sexual minority women and sexual minority women of color are at higher risk for substance use disorders than their heterosexual peers (Mereish & Bradford, 2014). Because half of the women in early recovery identified as a sexual minority, but only one woman in sustained recovery identified as such, further research is needed to assess whether sexual minority women persist in treatment at the same rate as their heterosexual peers. Additionally, these results highlight the importance of assessing for and addressing the intersectional identities of women in substance abuse treatment and research. Currently, sexual orientation is rarely reported in studies of pregnant, post-partum, and parenting women, potentially reflecting bias or a blind spot among researchers.

Additionally, the fact that the majority of the women lived in the treatment center's residential facility ($n = 22$) suggests stable housing as an essential component of comprehensive recovery programming for pregnant, post-partum, and parenting women. Finally, the fact that all women in the study were unemployed and lacked a college degree underscores the need for programming to address the educational needs of women in recovery from substance use. The study site provides such programming, in accordance with evidenced-based recommendations from the literature (Ashley, Marsden, & Brady, 2003), and at the conclusion of the study five women in the treatment group

had found employment and/or enrolled in college or technical degree programs. These outcomes are consistent with previous research, which suggests that women treated in comprehensive gender-specific programs have longer lengths of stay and completion (Grella, 1999), higher rates of long-term abstinence (Grella, Joshi, & Hser, 2000), and improved employment and relational outcomes (Dahlgren & Willander, 1989). Without stable employment and housing, the women in the study noted their vulnerability to returning to "old people, places, and things" to meet basic needs. Specifically, they noted their risk to return to selling drugs for income and entering dependent relationships, both of which jeopardize child custody and increase risk for legal involvement and trauma.

Maternal characteristics and agency involvement. Of the treatment group participants only four had full custody of all children compared with seven women in the active control group. The majority of the women in the study had both social service involvement (*n* = 16) and legal involvement resulting in probation or parole (*n* = 15). Over half of the women (*n* = 13) were mandated to attend treatment.

These results suggest the importance of both internal and external motivators for recovery. The women in the study often referenced their children as a major source of motivation for persisting in treatment. Women in the treatment group, for example, specifically noted that becoming a mother for the first time, trying to regain child custody, and rebuilding bonds and relationships with children harmed by substance use gave meaning to their recovery. These statements are consistent with previous literature suggesting that despite weaker SOC than men at admission, women tend to persist in treatment at higher rates likely due to: (a) the motivating force of their children (Anderson & Berg, 2001); (b) collaborative relationships among the site and agency

stakeholders (Baird, 2008); and (c) the role of transformational relationships with treatment providers (Chablani & Spinney, 2011; Robles et al., 1994). Additionally, consistent with existing literature (e.g., Haller et al., 2003), external monitoring of DSS and the legal system appeared to support women in persisting in treatment to the point they entered sustained recovery and had increased access to internal motivation to support recovery.

Substance use and recovery characteristics. National substance abuse trends reflect marijuana as the primary substance of abuse among the general population followed by heroine/opiates (SAMHSA, 2013). Among pregnant, post-partum, and parenting women, high rates of alcohol exposure among infants are noted (U.S. DHHS, 1992). Women in the study, however, most often noted heroine/opiates as their primary substance of abuse or implicated heroine among multiple substances of abuse ($n = 12$). It is unclear whether these results reflect true use patterns among this population or whether women who abuse heroine/opiates are more likely to become involved in social service or legal systems which then refer them for treatment.

In addition to a primary substance use diagnosis, the majority of the women in the study reported a co-occurring mental health diagnosis. These results are consistent with trends noted by Brady and Ashley (2005), who found that substance using females have higher rates of co-occuring mental health disorders and often cite trauma as the precipitating event to drug use. Women who reported their diagnosis most often noted depression and anxiety. Although this study did not assess for trauma, the researcher noted that all women in the treatment group discussed the need to address and heal from

past trauma (e.g., childhood sexual abuse, domestic violence) as important for their recovery.

Despite higher rates of primary or polysbustance heroine/opiate abuse compared with other substances, only two participants in the study were enrolled in methadone maintenance treatment (MMT). Existing literature predicts higher rates of attrition among pregnant women enrolled in abstinence-based therapy versus MMT (Kissin et al., 2004). These results may support existing research underscoring the role of relationships (Chablani & Spinney, 2011; Robles et al., 1994) and comprehensive gender-specific treatment (Ashley, Marsden, & Brady, 2003; Baird, 2008; Brady & Ashley, 2005) in mitigating attrition among pregnant, post-partum, and parenting women.

All women in the study participated in Twelve-Step Programs (TSPs). Patterns of engagement in TSPs, however, varied according to group. Women in the treatment group all had sponsors and attended an average of 4 meetings per week. Likewise, women in the control group attended an average of 4 meetings per week, but only seven had sponsors. These trends were expected due to the treatment group being in sustained recovery and the control group being in early recovery. Causation and the direction of influence cannot be assumed based on this data.

Religious and spiritual characteristics. The majority of the women in the study ($n = 21$) claimed a religious affiliation and stated that spiritual concerns were "very important" for their recovery. This finding is supportive of recovery according to Roland and Kaskutas (2002), who found that church attendance in combination with the spiritual practices associated with AA, were significant predictors of past 30-day sobriety compared to church attendance alone. Additionally, the results are consistent with findings by Fallot

and Heckman (2005) that women trauma survivors with co-occuring mental health and substance abuse disorders rely more heavily on religious and spiritual coping compared to the general population. In the current study, those in the EXA treatment group ($n = 9$), however, had more active religious/spiritual involvement compared with those in the active control group *(n = 4)*. Women in the EXA treatment group also described their spiritual practices at greater rates and in greater detail than those in the active control group. These results support existing literature that spiritual practices rather than beliefs promote longer periods of sobriety, fewer relapses, and abstinence (Carter, 1998; Robinson et al., 2007; Robinson et al., 2011; Roland & Kaskutas, 2002; Zemore & Kaskutas, 2004).

In addition to children being a strong source of motivation for recovery, all women in the treatment group noted their spirituality as a central motivating force that gave meaning to their recovery. The women discussed their church, attendance at AA and NA, prayer, meditation, spiritual readings, and developing a real relationship with their Higher Power as practices that help to sustain their sobriety. Again causation and the direction of influence cannot be determined based on these results.

In conclusion, the descriptive findings of this study are consistent with past research by Havens et al. (2009), who identified the following correlates of maternal substance abuse: (a) current psychopathology, (b) being unemployed, (c) being unmarried, and (d) being of non-Hispanic ethnicity. Furthermore, the present study extends these findings by exploring resources for recovery including religious/spiritual engagement, recovery related behaviors and supports, and agency involvement. The following sections will discuss results related to the outcome variables, SOC and DSE.

Sense of Coherence

SOC is the central construct in Antonovsky's (1979, 1987) theory of salutogenesis. Antonovsky (1987) defines SOC as a flexible orientation to life that supports successful coping through the breadth of human challenges and stressors. Specifically, those with a strong SOC view the world and life's challenges and stressors as comprehensible or able to be understood. Additionally, they have access to resources for coping, which make the stressors manageable, and they have motivation to cope due to a sense of purpose or meaning in life.

A strong SOC, as measured by the Sense of Coherence-Orientation to Life Questionnaire (SOC-OLQ; Antonovsky, 1987), has been linked with a wide range of positive biopsychosocial factors, including self-esteem and support availability (Nyamathi, 1991), internal locus of control and quality of life (Antonovsky, 1993), decreased risk of coronary heart disease and all-cause mortality (Poppius, Tenkanen, Hakama, Kalimo, & Pitkanen, 2003). In terms of addiction, a strong SOC has been linked with higher rates of treatment retention, abstinence, and survival (Andersen & Berg, 2001; Berg, 1996; Chen, 2006; Feigin & Sapir, 2005). Despite the role of SOC in predicting substance abuse treatment outcomes, few studies have intentionally sought to strengthen SOC among participants or assessed the role of existing programming in increasing SOC (c.f., Chen, 2001). This study addressed these gaps in the literature by testing the results of an expressive arts group therapy intervention in strengthening the SOC of treatment group participants relative to an active control group. The design of the study thus answered Antonovsky's (1996) call both to conduct salutogenic research and to use SOC as a dependent variable.

Results indicated that the expressive arts group therapy intervention had a

significant impact on SOC for treatment group participants when compared to those in

the active control group, even after controlling for pretest scores. Although SOC

normative data does not exist for pregnant, post-partum, and parenting women in

recovery from substance use, post SOC-13 scores in this study fell in the margins [2.72 –

5.97, SD = 1.06] reported by Eriksson and Lindström (2005) in their comprehensive

review of the SOC literature. The implications of this finding are significant given that

those with a stronger SOC are more likely to persist in treatment, maintain abstinence,

and survive (Andersen & Berg, 2001; Berg, 1996; Chen, 2006; Feigin & Sapir, 2005).

Additionally, parents with a stronger SOC are in a better position to provide experiences

that promote a strong SOC in their children. According to Lindström and Ericksson

(2005) SOC tends to increase with age over the lifespan; however, the strength of SOC is

most influenced during the first two decades of life, with health implications throughout

development. Thus, increasing SOC among maternal substance users may have a

systemic and long-term impact on the SOC of their children.

The findings of this study extend those of Chen (2001), who found that a spiritual

program of recovery (TSP) strengthened SOC among Israeli prisoners compared with

inmates in the non-spiritual program of recovery. While Chen's study suggested the

efficacy of TSPs for increasing SOC, this is the first known study to introduce a

salutogenic intervention intentionally structured to increase SOC among a substance

abusing populations, and specifically among substance abusing pregnant, post-partum,

and parenting women. The results of this study are encouraging, especially given that

women appear to have lower SOC scores than men (Andersen & Berg, 2010; Antonovsky

et al., 1987; Chen, 2009), and that pregnant, post-partum, and parenting women represent a particularly vulnerable population of women.

Understanding the results of this study in the context of Antonovsky's (1979, 1986) theory of salutogenesis, indicates that ultimately the components of SOC (meaning, manageability, and comprehensibility) were strengthened through expressive arts group therapy intervention. Whether this change happened by acting directly upon SOC or whether it occurred indirectly by strengthening the women's Generalized Resistance Resources (GRRs) is unknown, though both mechanisms of change are likely. According to Antonovsky (1979, 1987) GRRs are salutary (health promoting) factors that act to avoid or combat stressors and promote a strong SOC. These salutary factors actively promote health and order, in contrast to risk factors that are focused on identifying precursors to disorder (Antonovsky, 1996). GRRs contribute to life experiences that are characterized by (a) consistency, (b) overload-underload balance (e.g., adequate level of challenge and responsibility), and (c) participation in socially valued decision-making (Antonovsky, 1987). Repeated experiences of this kind enhance SOC by contributing to a sense of meaning, manageability, and comprehensibility that translate into positive health outcomes.

It is likely that the consistent process and structure of the intervention (i.e., the GRACE model) promoted safety, consistency, and order that allowed the content targeted at strengthening components of SOC to be accessible. This content was intentionally structured as well, taking into consideration the nature of the arts (Hinz, 2009) and empirically supported arts-based interventions, stages of group development (Corey, Corey, & Corey, 2010), and the essential roles of presence and process in facilitating

EXA work (Eberhart & Atkins, 2014). Additionally the balance of reflective, experiential, and expressive components combined with the act of sharing and being witnessed by a group of peers likely allowed for the content to be integrated in a meaningful way. While the intentional structure of the expressive arts group therapy intervention may account for the statistically significant gains in SOC among treatment group participants, these results could also be due to the salutogenic effects of EXA in general, the therapeutic writing component of the intervention, or the therapeutic factors associated with group counseling.

The very nature of EXA work supports clients in creating order out of chaos, in making sense out experience, and in giving that experience meaning (Atkins & Williams, 2007; Appalachian Expressive Arts Collective, 2003; Degges-White & Davis, 2010; Knill, Levine, & Levine, 2005; Malchiodi, 2013; McNiff, 2009; Rogers, 1993). Thus, EXA inherently supports the factors of SOC (meaning, manageability, comprehensibility). As such EXA itself, rather than the intervention may be responsible for the results of this study. Future research could explore this question further by employing a non-structured EXA intervention with the same population.

Like EXA, therapeutic writing supports the components of SOC. According to Pennebaker and Evans (2014) and Thompson (2011), therapeutic writing helps one to (a) construct a coherent narrative that makes sense out of experience, (b) find meaning in the midst of challenge or following trauma, and (c) express and effectively contain emotion. These benefits again are directly in alignment with the factors of SOC.

Finally, the therapeutic factors of group described by Yalom (1995) may have supported the SOC outcomes of this study. Compared with the active control group, the

treatment group was already very cohesive at the beginning of the study due to most of

the women being in treatment together for several months. Yalom (1995) suggests that

cohesiveness supports the therapeutic factors of group counseling. In a cohesive group,

for instance, participants may find meaning in shared experience (i.e., universality) and

support one another in learning how to navigate or manage challenges (i.e., altruism,

imparting information). Additionally, they may support one another in expressing

thoughts and feelings about the past (i.e., catharsis) and in making sense of their

experience in a way that paves a path for a better future (i.e., self-understanding,

instillation of hope). Thus, the treatment effects may be explained not by the intervention,

but rather by the therapeutic factors of group counseling.

In summary, the current study found that a structured expressive arts group

therapy intervention produced statistically significant gains in SOC among treatment

group participants compared to active control group participants. While this research is

promising, further research is needed to better understand the nature and mechanisms of

such gains. While the researcher believes that the combination of expressive arts,

therapeutic writing, and group counseling worked together synergistically to produce the

results, future research could investigate the efficacy of these interventions independently.

The following section will discuss the major findings related to the second dependent

variable in the study, DSE.

Daily Spiritual Experience

Underwood and Teresi (2002) define DSE as "a person's perception of the

transcendent (God, the divine) in daily life and his or her perception of his or her

interaction with or involvement of the transcendent in life" (p. 23). DSEs represent

ordinary spiritual experiences such as gratitude, compassion, awe, and deep inner peace (Underwood and Teresi, 2002). The frequency of daily, ordinary spiritual experiences, as measured by the Daily Spiritual Experiences Scale (DSES; Underwood & Teresi, 2002) has been linked with a variety of positive psychosocial and substance abuse outcomes.

Previous research has indicated that frequent DSEs are significantly negative correlated with anxiety, depression, and significantly positive correlations with optimism, perceived social support, and quality of life (Underwood & Teresi, 2002). Increases in DSE are also associated with reductions in substance use (e.g., less daily alcohol intake), longer periods of sobriety, fewer relapses, and abstinence (Carter, 1998; Robinson, Cranford, Webb, & Brower, 2007; Robinson, Krentzman, Webb, & Brower, 2011; Underwood & Teresi, 2002; Zemore & Kaskutas, 2004). Such outcomes suggest that spiritual involvement and engagement in daily life can bolster one's resources for coping with stress. Despite evidence supporting the role of DSE in promoting positive substance abuse treatment outcomes, no known studies have documented the efficacy of non-Twelve-Step Program (TSP) interventions intentionally structured to increase this resource for recovery among pregnant, post-partum, and parenting women. The present study addressed this gap in the research by using DSE as a dependent variable.

Results indicated that the expressive arts group therapy intervention was not effective in producing statistically significant increases in DSE over time; however, treatment group participants did evidence higher mean DSES scores ($M = 5.66$) compared with control group participants ($M = 4.98$). Statistical differences were not evident due to the small sample size, which reduced the power of the analysis. Furthermore, there were numerous problems with this data including a widespread ceiling

effect as evidenced by the majority of respondents ($n = 21$) answering in the "every day" or "many times a day" frequency range. These results may be related to previous research findings, which indicate that women trauma survivors with co-occurring mental health and substance abuse disorders rely heavily on religious and spiritual coping compared to the general population (Fallot & Heckman, 2005). Additionally, all women in the study were involved in TSPs, which have been documented to facilitate spiritual change (Brown & Peterson, 1991; Kelly, Stout, Magill, Tonigan, & Pagano, 2011; Roland & Kaskutas, 2002). These results could also be due in part to not having the appropriate instrument to measure DSE for this study. The EXA group sought to strengthen participants' DSEs by incorporating specific spiritual practices as part of the sessions; yet, the DSES instrument measured frequency rather than the strength of the DSEs. In conclusion, the results of the study suggest that women who engage TSPs and the associated spiritual practices are unlikely to experience significant changes in DSE, as measured by the DSES, as a result of additional intervention.

Despite non-significant findings, post-test differences in DSE according to group were evident (Treatment: $M = 5.66$; Control: $M = 4.98$), suggesting that frequency of DSEs may increase with sustained recovery or may be influenced by intervention. Although causation cannot be determined based on this study, results indicate that the women strongly relied on spirituality and spiritual practices to support their recovery. As such, the prognosis for remaining abstinent from substances may be bolstered (Bliss, 2007; Carroll, 1993; Carter, 1998; Miller, 1998). Previous literature supports the role of spirituality in contributing to SOC strength, particularly by contributing to a sense of meaning, which provides motivation for persevering through life's challenges

(Antonovsky, 1979, 1987; Chen, 2001; Unterrainer, Ladenhauf, Moazedi, Wallner-Liebmann, & Fink, 2010; Unterrainer, Ladenhauf, Wallner-Liebmann, & Fink, 2011). In terms of the current findings, daily ordinary spiritual experiences may support viewing the world as comprehensible, manageable, and meaningful, thus indirectly strengthening participants' SOC. The following section will discuss the contributions of the study.

<div align="center">Contributions of the Study</div>

This is the first known study to explore changes in SOC and DSE among pregnant, post-partum, and parenting women in recovery from substance abuse. The focus on this stigmatized and often disenfranchised group of women will call attention to their specific needs and interventions that can support positive treatment outcomes. The use of salutogenic outcome variables represents a significant contribution to the field of addictions, which relies on the disease model to conceptualize and treat substance abuse. The study also addresses common methodological flaws found in EXA research by using a quasi-experimental design grounded in a salutogenic theoretical framework. The current research contributes to the field of EXA by adding to the literature a specific EXA group format seeking to enhance SOC. More importantly, this framework can easily be adapted to be used with other populations. The interdisciplinary nature of this research contributes to possibilities of future collaboration among those in the fields of expressive arts, addiction, health promotion and counseling. By working together, these fields can expand and enrich education, research, and practice in order to benefit those impacted by addiction. The following section will discuss the study's limitations.

Limitations

While the contributions of the study are notable, there are several limitations that impact the generalizability of the results. Among these factors is the study's small sample size ($N = 24$). The small sample size was impacted, in part, by factors beyond the control of the researcher. At the time the study was being conducted, the research site experienced high attrition due to budget constraints passed down by the Managed Care Organization (MCO), which recently assumed responsibility for allocating public mental health and substance abuse treatment funds. Despite the need for ongoing treatment as determined by licensed substance abuse counselors using pre-determined criteria for continuing stay, women enrolled in the site's programming received letters from the MCO stating that they were approaching or had exceeded their allotted number of days of treatment. Some received bills for their services and subsequently dropped out, others intentionally relapsed in order to continue treatment, and still others continued treatment despite their inability to pay the bill but had their treatment expedited due to external pressure by the MCO. As a result, enrollment dropped significantly, thus impacting the available sample size and the configuration of the treatment and control groups. Additionally although pretest scores of the control group women who dropped out of treatment ($n = 3$) were not significantly different from those who remained in treatment, this attrition may have resulted in a control group sample that was not representative of those in early recovery.

The final configuration of the groups included women from all levels of day treatment. Random assignment to groups was not possible as treatment at the site is conducted in pre-existing intact groups. Women in the active control group were drawn

from the level one intact group (early recovery) and women for the treatment group were drawn from the level two and three groups (sustained recovery). Because women differed according to length of time in recovery, pretest scores were used as a covariate. The addition of a covariate decreased the power of the statistical analysis, as a degree of freedom was lost. Results indicated, however, that there were no significant differences between groups on pretest SOC or DSES scores as anticipated, so the addition of a covariate was actually unnecessary. The use of univariate statistics and two separate ANCOVA analyses was necessary, however, due to the small sample size and the assumptions required by multivariate statistical procedures.

Limitations may also exist due to the nature of the self-report instrumentation. Particularly problematic in the study was the data from the DSES. The ceiling effect evident in the majority of pre- and posttest DSES measures could reflect that the women's self reporting of their DSEs was impacted by social desirability factors. Conversely, TSP participation could have resulted in saturation of DSEs that were thus not amenable to change. Additionally, although the DSES instrument is well established in substance abuse research for documenting spiritual change, it failed to capture the type of change that the researcher saw take place through the intervention. Specifically, while the instrument assessed for feelings of peace, joy, connection and acceptance of others, the researcher observed more changes related to self-compassion, worthiness, self-acceptance, and self-confidence.

Spiritual generosity toward self was evident in the women's check-ins, their recovery intentions, and reflections on their art. For example, in session 7, the second manageability session, one woman chose an image of puzzle pieces at check in. She

stated that she used to feel shame for relapsing, but now recognizes that she didn't have the pieces she needed before in her recovery. She stated, "Things seem more bright now because of how those missing pieces are making everything come together." In the same session, another woman chose the quote: "Recovery isn't something you do or don't deserve to have. Recovery is something you allow yourself." She was drawn to this quote stating, "I have struggled with loving myself and feeling worthy. I have felt stuck a lot and down on myself. This quote reminds me that recovery is possible and I am worthy of it. I need to get out of my way." This woman went on paint a full body portrait of herself, with a blue sky background, vines climbing up the body, chains around the ankles, storm clouds throughout, and vibrantly colored flowers blooming. In reflecting on her painting, she stated:

> The chains of addiction will always be a part of my life. I can still flourish though and learn to manage my addiction. The storm clouds are just part of life. I had two years of sobriety but relapsed during a hard time. I am now working on managing the storms….This class has helped me to find the creative and artistic side of myself, which I never thought I was. It's surprising to see how much it brings out and things you didn't know were inside.

During the closing of session 7, another woman drew a pearl-like bead. Noting that pearls are formed slowly over time, she stated that she needs to be patient with herself during her recovery and gentle with herself when she slips up. The DSES instrument did not adequately capture these internal spiritual shifts. Based on the results of the study and its limitations, recommendations for future research will be discussed in the following section.

Recommendations for Future Research

Given that an intentionally structured expressive arts group therapy intervention resulted in statistically significant increases ($p = .01$) in SOC among treatment group participants when compared to active control group participants, the researcher recommends replication of the study among the same population of women using a larger sample size. The model used in this study could also be implemented in aftercare programs to reduce the risk of relapse by maintaining and strengthening women's SOC. Additionally, similar interventions could be piloted among diverse groups of substance abusing populations (e.g., men's treatment programs, adolescent treatment groups, recovery communities).

Future studies may also examine differences in SOC based on demographic data, such as age, sexual orientation, and in order to target those with a weaker SOC. The SOC literature, for instance, suggests that SOC may increase with age (Lindström & Ericksson, 2005). Differences in SOC based on age were not addressed in this study but could reveal important implications for treatment of pregnant, postpartum, and parenting women in recovery. In addition to the demographic data assessed in this study, trauma history may be an important variable to include in future research. Maternal-specific variables linked to substance use may also strengthen future research (e.g., post-partum depression, abortion history, history of birth complications/fetal abnormalities due to substance use). Finally, the persistence in treatment of women with primary heroine abuse despite not receiving MMT would be a valuable area to explore in future research.

Studies seeking to assess or promote spiritual change among populations of pregnant, postpartum, and parenting women in recovery from substance use should

carefully consider choice of instrumentation. Given the ceiling effect in the present study, future studies using this instrument with the same population could track changes in DSEs over time beginning with admission to treatment or with entry into TSPs. Such longitudinal studies could investigate the role of treatment and/or TSPs in increasing DSEs among this population relative to a control group that does not participate in the treatment intervention/TSPs. Differences would also be more likely in actively abusing populations versus those who have already achieved abstinence (Underwood & Teresi, 2002). Exploring the role of DSE in mediating the relationship between the intervention and SOC would be an interesting pursuit for future research. Alternative spirituality instrumentation that includes social desirability or impression management scales (e.g., The Spiritual Assessment Inventory: Hall & Edwards, 2002) may also be useful. Future studies using the protocol introduced through this research could also examine changes in spiritual orientation toward self (i.e., self-compassion, self-worth, self-acceptance) or locus of control for change (i.e., God, self, self through God).   Qualitative methodology would also be valuable in understanding spiritual change and the nature of gains in SOC.

<center>Conclusion</center>

In summary, the present study found that a salutogenic expressive group therapy intervention intentionally structured to strengthen SOC and DSE among pregnant, post-partum, and parenting women in recovery from substance abuse was effective in producing statistically significant gains in SOC but not DSE relative to an active control group. Based on these findings, future research using structured expressive arts interventions to increase SOC among addicted populations is recommended. This study

and future interdisciplinary research of its kind will be instrumental in expanding

effective treatment options for those in recovery from substance abuse.

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APPENDIX A: TREATMENT PROTOCOL

Session 1 (Introduction)

Walk-in: Choose a picture that represents how you are doing today.

(25 min) Introduction to the Group
- Purpose of the group
- Group Rules
    - Think, pair, share.
    - What do you need to feel safe in group?
    - Write on notecard, share with partner, report to larger group, write on large paper.
- Introduction to expressive arts process (GRACE model)
- Choose journals

(10min) Grounding:
- Loving-kindness Meditation (to self)
- Visual Check-in (Practice using "I feel" statements)

(5 min) Reflection:
- A list of things that describe me
- Choose 5 and create "I am" poem

(30 min) Arts Immersion: *Envelope of Self*
- Outside: what are you sending to the world
- Inside: What are you keeping sealed from the world?
- Use of mixed media (colored pencils, markers, words/images from magazines etc.)

(15 min) Connection:
- Invitation to share envelopes
- Introduce EAT ways of responding to art work (non-evaluative, non-interpretive)
    - I see, feel, imagine statements
    - Responding to art with art
    - Offering a non-verbal gesture or movement
- Person to right responds. I will model this by responding to person on my left.

(5 min) Expression:
- Bead of intention
    - "What is your recovery intention from our group today?"
    - Write in journal, choose bead, speak intention to group.
    - After all have shared, group states chosen closure phrase in unison.

Session 2 (Meaning)

(10 min) Grounding:
- Loving-kindness Meditation (to self)
- Visual Check-in (Practice using "I feel" statements)

(10-15 min) Reflection:
- Think of a song that provides motivation for your recovery
- What meaning does this song have for your recovery?
- What feelings does it evoke? Thoughts? Behaviors?

(30 min) Arts Immersion: *Recovery Song*
- Play several of the women's songs related to recovery
- Create a visual representation of the meaning/motivation your song gives you in your own recovery journey. (Mixed media available)
- Title your visual representation

(25 min) Connection:
- Create a group poem by linking titles together and adding transitions where necessary (use large post-it paper). This poem will represent the group's shared meaning and motivation for recovery.
- Read group poem

(5 min) Expression:
- Bead of intention
  - "What is your recovery intention from our group today?"
  - Write in journal, choose bead, speak intention to group.
  - After all have shared, group states chosen closure phrase in unison.

*Make copies of group poem to hand out at Session 3.

Session 3 (Meaning)

(15 min) Grounding:
- Loving-kindness Meditation (to self and sober friend/support)
- Visual Check-in (Practice using "I feel" statements)

(10) Reflection
- Handout copies of group poem, can paste in journal.
- Listing exercise: sources of motivation for recovery

(30 min) Arts Immersion: *Meaning Mandala*
- Center = strongest motivation
- Moving out to other layers of motivation.
- Bring and share example from someone in recovery.
- Media: colored pencils, markers, craypas

(25 min) Connection
- Go around share
- Everyone responds to everyone with a gesture and one feeling word

(5min) Expression
- Bead of intention
  - "What is your recovery intention from our group today?"
  - Write in journal, choose bead, speak intention to group.
  - After all have shared, group states chosen closure phrase in unison.

Session 4 (Comprehensibility)

(15 min) Grounding:
- Loving-kindness Meditation (to self and sober friend/support)
- Visual Check-in (Practice using "I feel" statements)

(15 min) Reflection
- Make 1-2 copies of each Recovery Art piece (non-triggering images).
- Participants choose a Recovery Art piece that resonates with them and their particular challenges/resources for recovery.
- Glue to journal
- Respond to visual image through writing. Can ask questions, dialogue with image, or free write

(20 min) Arts Immersion: *Sandtray*
- Individual Sandtray: Represent your internal and external challenges to recovery
- 3 min to share sandtray
- Group Sandtray: in the middle (representing groups challenges to recovery)
- Add a miniature from your sand tray or a miniature that has not been used to add to the group sand tray.

(30 min) Connection
- 2-3 min to think of one source of strength or motivation that you can bring in to help you navigate your challenge. Choose 2 miniatures, one to add to your individual sand tray that can help you and one to add to group sand tray as a gift to support others in their recovery.
- Co-construct a recovery story of final sandtray
- Take a polaroid of individual and group sand tray with strengths/resources.

(5min) Expression
- Bead of intention
  - "What is your recovery intention from our group today?"
  - Write in journal, choose bead, speak intention to group.
  - After all have shared, group states chosen closure phrase in unison.

Session 5 (Comprehensibility)

(15 min) Grounding:
- Loving-kindness Meditation (to self, sober friend/support, and neutral person)
- Visual Check-in (Practice using "I feel" statements)

(10 min) Reflection
- Explain emotional, cognitive, and behavioral challenge
- My emotional challenges to recovery are: e.g., depression, shame
- My cognitive challenges to recovery are: e.g., critical messages
- My behavioral challenges to recovery are: e.g, hanging out with using friends
- My physical challenges to recovery are: e.g., dental issues, weight loss etc.
- My social/relational challenges to recovery are: e.g., trust issues, few sober friends
- My spiritual challenges to recovery are: e.g., stopped going to church, feel disconnected from Higher Power

(30 min) Arts Immersion: *Reshaping Challenges*
- Use clay to represent a recovery challenge of participant's choosing

(25 min) Connection
- Create gallery of images (polaroid of challenges)
- Group members respond to images on strips of paper (I see, feel, or imagine)
- (10 min) Modify one or more challenges based on perceptions of others.

(5min) Expression
- Bead of intention
  - "What is your recovery intention from our group today?"
  - Write in journal, choose bead, speak intention to group.
  - After all have shared, group states chosen closure phrase in unison.

Session 6 (Manageability)

(15 min) Grounding:
- Loving-kindness Meditation (to self, sober friend/support, and neutral person)
- Visual Check-in (Practice using "I feel" statements)

(10 min) Reflection
- List internal and external challenges and resources for recovery on notecards provided
- Create a dialogue between one or more challenge and resources (give example "I wake up and feel depressed and want to use" "I know spirituality can help me, and if I engage in my spiritual practice it can help me not use." Challenge responds"

(60 min) Arts Immersion: *Recovery Theater*
- Psychodrama: Dialogues will be continued and expanded by enacting in small groups. Members will draw a notecard and take on the voice or role of one of the challenges/resources listed

(10 minutes): Connection:
- I see, feel, or imagine

(5min) Expression
- Bead of intention
  - "What is your recovery intention from our group today?"
  - Write in journal, choose bead, speak intention to group.
  - After all have shared, group states chosen closure phrase in unison.

Session 7 (Manageability)

(15 min) Grounding:
- Loving-kindness Meditation (to self, sober friend/support, neutral person, difficult person)
- Visual Check-in (Practice using "I feel" statements)

(10 min) Reflection
- Respond to a quote or image that embodies their strengths and resources for recovery

(40min) Arts Immersion: *Recovery Resource Self-Portraits*
- Paint outline of full body on paper provided
- Depict internal resources inside and external resources outside using mixed media
- Gallery: Respond in writing/images "She is___"

(20 min) Connection
- Arrange responses/add lines to create a poem (done individually)
- Invitation to share poem with group

(5min) Expression
- Bead of intention
  - "What is your recovery intention from our group today?"
  - Write in journal, choose bead, speak intention to group.
  - After all have shared, group states chosen closure phrase in unison.

Session 8 (Termination)

(15 min) Grounding:
- Loving-kindness Meditation (to self, sober friend/support, neutral person, difficult person)
- Visual Check-in (Practice using "I feel" statements)

(10 min) Reflection
- Bring visual representation of SOC mandala
- Center: motivation
- Outer Layers of Mandala: Resources
- Outside of Mandala: Challenges
- Freewrite to reflect on components of SOC: strengths, areas of growth
-

(35 min) Arts Immersion: *Recovery Vision Board*
- Vision Board: Where do you see yourself going from here?
- Collage

(20 min) Connection
- Gallery of journals with vision boards
- Respond to journals and vision boards on sentence strips "Thank you for _____" and "I give you _____" to recognize one another's strengths and needs for sustained recovery.

(5min) Expression
- Bead of intention
  - "What is your recovery intention from our group today?"
  - Write in journal, choose bead, speak intention to group.
  - After all have shared, group states chosen closure phrase in unison.

APPENDIX B: INFORMED CONSENT

University of North Carolina at Charlotte

INFORMED CONSENT

Project Title and Purpose:
You are invited to participate in a research study entitled *Sense of Coherence and Spirituality Among Pregnant, Post-partum, and Parenting Women in Recovery from Substance Abuse: An Expressive Arts Group Therapy Intervention.* The purpose of this study is to intentionally strengthen women's internal resources for recovery through an expressive arts group therapy intervention. The group will be structured to promote a strong Sense of Coherence (meaning, manageability, and understanding) and spiritual practices, both of which are related to substance abuse treatment completion, abstinence, and survival.

Investigator(s):
This study is being conducted by Melia Snyder, MA, LPC, LCAS-A, NCC, Doctoral Candidate in the Department of Counseling at UNC Charlotte (UNCC). She will be working under the supervision of Dr. Peggy Ceballos in the Department of Counseling.

Eligibility:
Adult (age 18+) pregnant, post-partum, or parenting women in recovery from substance abuse enrolled in treatment at Community Choices, Inc./CASCADE and in the *Reaching for Recovery* or *Making It Happen* levels are eligible to participate in this research study.

Description of Participation:
If you are in the *Reaching for Recovery* or in the *Making it Happen* levels of treatment at CASCADE, you will be offered the opportunity to participate in the research study. If you volunteer to participate, you will be asked to complete a demographic questionnaire and two surveys. Completion of initial and final demographic questionnaire and survey instruments will take approximately 20 minutes for a total of approximately 40 minutes and will be scheduled at a time that is convenient for you and agreed upon by your treatment providers at CASCADE.

If you are part of the *Making it Happen* group you will also participate in two expressive arts group therapy sessions per week for four weeks; each session will last 1 hour and 30 minutes. This group will integrate the arts (e.g., poetry, visual art, clay, music etc.) in order to support women in identifying, expressing, and strengthening their resources for recovery. If you are part of the Reaching for Recovery group, you will participate in DBT and 16 Step groups provided by CASCADE. Participants in this active control

group will be given the opportunity to participate in the Expressive Arts group once the study has finished.

Risks and Benefits of Participation:
There are no known risks for completing the demographic and survey instruments. Risks associated with participating in either one of the groups include the potential for emotional distress in considering challenges related to your recovery. Additionally, the arts that will be used in the expressive arts group can sometimes evoke strong feelings or insight that may cause you to feel vulnerable. If the need for additional processing or therapeutic support arises following your participation in the expressive arts sessions, your primary counselor at CASCADE will be available. There may be additional risks that are currently unforeseeable. The benefits of participation in this study are the potential for healing and growth. Additionally, your motivation and internal resources for recovery may be strengthened. By participating in this study, you will be contributing to research that will inform the addictions field of innovative, evidence-supported treatment approaches. You may also benefit from the fact that your participation will help other women who are in similar situations as you. This study has the potential to spur further research into the area of resource-based approaches to addictions treatment. There are no costs to you that are associated with participating in this study.

Volunteer Statement:
You are a volunteer. The decision to participate in this study is completely up to you. If you decide to be in the study, you may stop at any time. You will not be treated any differently if you decide not to participate or if you stop once you have started.

Confidentiality versus Anonymity:
The data collected by the Investigator will not contain any identifying information, and will not link back to you or your participation in this study. The following steps will be taken to ensure your anonymity: When completing demographic and survey instruments, you will be assigned a unique identifier, which will be used in place of your name. A master list linking your name to your unique identifier will be used in order to match survey instruments completed before and after treatment. Following final data collection, this master list will be destroyed. The master list will be kept in a lockbox separate from the lockbox containing demographic and survey instruments. Demographic and survey instruments will be kept at Community Choices, Inc./CASCADE and will not leave the premises. Additionally, the Investigator has signed and will abide by the confidentiality policies outlined by Community Choices, Inc./CASCADE.

Fair Treatment and Respect:
UNCC wants to make sure that you are treated in a fair and respectful manner. Contact the University's Research Compliance Office (704-687-3309) if you have any questions about how you are treated as a study participant. If you have any questions about the project, please contact Melia Snyder at (704) 729-4490 or Dr. Peggy Ceballos at (704) 687-8962.

Participant Consent:

I have read the information in this consent form. I have had the chance to ask questions about this study, and those questions have been answered to my satisfaction. I am at least 18 years of age and I agree to participate in this research project. I understand that I will receive a copy of this form after the Principal Investigator and I have signed it.

Participant Name (PLEASE PRINT):

Participant Signature   DATE

Investigator Signature   DATE

APPENDIX C: DEMOGRAPHIC FORM

Today's Date:_____

A. Identification

Date of Birth: _____   Race:_____

Current Living Situation:

□ On own   □ With Others   □ Shelter   □ Homeless   □ Treatment Center

B. Family Information

Are you pregnant: □ Yes, Due date: _____   □ No

How many children do you have? _____   Ages: _____

Do you have custody of all of your children? □ Yes   □ No

Relationship Status: □ Single   □ In a Relationship   □ In a Domestic Partnership

□ Married   □ Separated   □ Divorced

Do you have a sober support system? □ Yes   □ No

C. Agency Involvement

Do you have an open DSS/YFS case? □ Yes, Reason: _____ □ No

Are you currently on probation or parole? □ Yes, Reason: _____ □ No

Were you mandated to attend treatment? □ Yes, by _____   □ No

D. Educational background

□ Some HS   □HS Diploma □ GED   □Some College   □Advanced Degree

E. Employment Status

□ Employed   □ Unemployed   □ Student   □ Disabled   □ Veteran

Work First Recipient? □ Yes   □ No

F. Substance Use & Mental Health History

Primary Substance of Abuse: _____

Currently enrolled in Methadone Maintenance Treatment? □ Yes □ No

Clean Time: □ Less than 1 month □ 2-3 months □ 4-5 months □ 6-7 months

□ 8-9 months □ 10-11 months □ 12+ months

Do you attend Twelve-Step Meetings? □ Yes, _____times/week   □ No

Do you have a Sponsor to support your Twelve-Step Work? □ Yes □ No

Do you have a co-occurring mental health condition?

□ Yes, if so specify:_____   □ No

G. Religious and Spiritual Involvement

Do you have a religious affiliation? □No □Yes, my religious affiliation is_____

How involved are you with your religious affiliation (check one):

□ None   □ Some/irregular   □Active

How important are spiritual concerns in your life?

□ Not Important   □ Somewhat Important   □ Very Important

Describe your current spiritual practices: _____

_____

_____