SALVE REGINA UNIVERSITY

MINDFUL BALANCE (BREATHE ACT LEARN ABOUT 'NOW' CARE EVERY DAY)

A PILOT PROJECT FOR DEPRESSED FEMALE ADOLESCENTS

A DISSERTATION SUBMITTED TO THE FACULTY OF THE NURSING PROGRAM IN

CANDIDACY FOR THE DEGREE OF DOCTOR OF NURSING PRACTICE

BY

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Abstract

Problem Statement: Major depression in adolescent females increased 65% in the past decade (Blue Cross and Blue Shield Association, The Health of America, 2018). Clinically depressed individuals are classified as 30% less healthy requiring more medical care and utilizing more medical resources (Wu, Kirk, Ohinmaa & Veugelers, 2017). Stressors of school transitions, higher academic expectations and peer approval merge during an influential period of brain development for the adolescent female (Ahmed, Bittencourt-Hewitt & Sebastion, 2015). Strong correlations have been found between experiencing depression as a young female adolescent and engaging in unhealthy lifestyle behaviors (Nemiary, Shim, Mattox & Holden, 2012). Young depressed women are at a heightened risk for experiencing unsafe thoughts, suicidal ideation and engaging in lethal actions (Swahn, et al., 2009; Canady, 2015; Avenevoli, Swendsen, He, Burstein & Merikangas, 2015; SAMHSA.gov/2016; Hoying & Melnyk, 2016). Intervening with an innovative group intervention paired with mindfulness may mitigate poor health outcomes. *Methods*: An intervention pilot-study, Mindful BALANCE (Breathe Act Learn About 'Now' Care Every Day), a two-hour group therapy program for 7 weekly sessions in an outpatient department of a children's psychiatric hospital. Inclusion criteria included healthy English-speaking females ages 12 – 16 with diagnosed clinical depression. The BDI-2 was used to screen for potential subjects (Beck Depression Inventory, (BDI)., n.d.). Exclusion criteria included actively practicing mindfulness or endorsing suicide. Watson's (2002; 2008) Transpersonal Caring Healing Theory supported Mindful BALANCE by focusing on the transformative power of connections, healing relationships and self–compassion (Gouveia, Canavarro & Moreira, 2019). A standardized, clinically studied intervention, Creating Opportunities for Personal Empowerment (COPE) (https://www.cope2thriveonline.com/), a Cognitive Behavioral Therapy Skills Building (CBSB) group program incorporating healthy lifestyle behavior, was followed by an innovative introduction to group mindfulness activities (Zoogman, Goldberg, Hoyt & Miller, 2015). Pre- and post- measures included PQH-9 (PRIME-MD, 2005), GAD-7 (Spitzer, et al., 2006), anthropometric metrics and a post treatment Mindfulness Survey. *Analysis:* PQH-9 and GAD-7, through the Wilcoxin Signed Ranks Test evaluating depressive and anxiety variations, revealed a trend toward improvement in symptomatology. Mindfulness practice was identified as a helpful vehicle to manage stress. During group, snacks were provided, and healthy choices were preferred over less nutrient rich foods. *Significance*: A standardized CBSB program for adolescents with a mindfulness component enhances mood, decreases perceived depression and anxiety while potentially impacting healthy behaviors and choices. Engaging adolescents in mindfulness and mental health interventions may lead to improved global well-being and may prevent potential future morbid health issues and death.

Keywords: pediatric, prevention, mental*obesity AND depression

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Dedication

To my loving husband who has stuck with me through pleasurable, transformative and neurotic times, my life partner.

To my children Maxwell, Samantha, Ilan and Cole, my main motivators who make life so meaningful.

To my father Herman, who taught me how to navigate clinically and personally though life, by example, not words.

Abbreviated Terms

COPE - Creating Opportunities for Personal Empowerment

CBSB - Cognitive Behavioral Skills Building

CBT - Cognitive Behavioral Therapy

GEF - Group Enrollment Form

S.I. Suicidal Ideation

NSSIB - Non-Suicidal Self-Injurious Behaviors

LOC - Loss of Control Eating

EFT - Emotional Freedom Tapping(Technique)

P.I. Primary Investigator

RR - Relaxation Response (Physiological relaxation, opposite of the fight or flight response)

SES - Socio-Economic Status

PA - Physical Activity

ASD - Autism Spectrum Disorder

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Chapter 1

The earlier adolescent years are a particularly vulnerable period related to entering puberty, adjusting to bodily changes, experiencing increased self-consciousness, and the vicissitudes of the parent-child relationship (Allen et al., 2003;Allen, Mcelhaney, Kuperminc & Jodl, 2004; Van Ryzin & Nowicka, 2013). The stressors of school transitions, higher academic expectations and concerns with peer approval merge during this influential period of brain development (Ahmed, Bittencourt-Hewitt &Sebastion, 2015). For young adolescents who are suffering from emerging or ongoing psychiatric issues, emotional turbulence may lead to serious and long-term mental and physical health issues (Broderick & Jennings, 2012; Van Ryzin and Nowicka, 2013; Marmorstein, Lacono & Legrand, 2014).

One in nine students in 9th-12th grade have attempted suicide at least once in the past year (Center for Disease Control [CDC], 2015; Youth Risk Behaviors Survey). In 2017, unsafe ideation, especially among young women, was on the rise and 17.1% of female high school students endorsed making a suicide plan within the past year (CDC.gov, 2017). As a nation, there has been a 65% increase in adolescent females being diagnosed with major depression in the past decade (Blue Cross and Blue Shield Association, The Health of America, 2018). Rhode Island's rate of depression is an astounding 6.4% (Asinof, (n.d.); Blue Cross and Blue Shield Association, 2018), which is the highest in the nation. Individuals who are clinically depressed are classified as 30% less healthy than those not carrying the diagnosis, requiring more medical care and utilizing more medical resources (Wu, Kirk, Ohinmaa & Veugelers, 2017).

Depressed young females have a higher incidence of engaging in unhealthy lifestyle behaviors, e.g. disordered eating habits. Unhealthy lifestyle choices continuing through adolescence increase lifelong poor habits and the development of chronic disease (Geserick et

al., 2018; Greydanus, et al., 2018) with an increased risk of malignant disease when unhealthy behaviors are sustained (Sung, Siegel, Rosenberg & Jemal, 2019). Depression places the adolescent at a higher risk for unsafe thoughts, suicidal ideation and engagement in lethal actions (Swahn, et al., 2009; Canady, 2015; Avenevoli, Swendsen, He, Burstein & Merikangas, 2015; SAMHSA.gov, 2016; Hoying & Melnyk, 2016).

Many depressed female adolescents are at a high risk of unsafe behaviors which could compromise their longevity (Canady, 2015; CDC, 2015; Child Mind Institute, 2015). Depressed females are in danger of developing long term physical health conditions (Greydanus et al., 2018; Harvard Health Publications 2012; Dockray, Susman & Dorn, 2009). Compromised mental and physical health can dampen and even destroy quality of life (Mannan, Mamun, Doi & Clavarino, 2016; Rankin et al., 2016; Avenevoli, Swendsen, He, Burstein & Meikangas, 2015). A priority is to identify sound evidence-based interventions aimed at preventing and treating depression, especially for those young women with newly emerging depression (Kann et al., 2016, Saluja et al., 2004) and at risk for engaging in ongoing unhealthy lifestyle behaviors (Broderick & Jennings, 2012) and impulsive actions (Nemiary, Shim, Mattox, & Holden, 2012; Swahn, et al., 2009). Depressed adolescent females have been found to be more sedentary and make unhealthy food choices which may compromise their overall health (Kalarchian & Marcus, 2012; Nemiary, et al., 2012; Tanofsky-Kraff, et al., 2011). Programs focusing on early-onset cases of depression, especially among young women, are vital (Avenevoli, et al., 2015; Kalarchian & Marcus, 2012; Mannan, et al., 2016; Marmorstein, et al., 2014).

The depressed adolescent may perceive participating in more physically engaging activities a daunting task (Melnyk, et al.,2006; Hoying & Melnyk, 2016; Mannan, et al., 2016). Depressed young women may lack the knowledge of activities to help them feel better (Lusk &

Melnyk,2013; McCarty, Weisz & Hamilton, 2007). They may feel alone in their struggles or not know how to elicit support for themselves from others (Nemiary, et al., 2012; Lusk & Melnyk,2013). Previous experiences with peers or perceptions of these encounters may be viewed with negativity (Rathus, Miller & Bonavitacola, 2018; Klingle & Van Vliet, 2017; Lusk & Melnyk, 2013; Haen & Weil, 2010).

Group therapy can be a highly effective method of delivering supportive care (Arias-Pujol & Anguera, 2017; Pingitore & Ferszt, 2017; Haen & Weil, 2010). Group treatment optimally provides a supportive environment where connections are formed, and participants gain insight, leading to growth and recovery. A Cognitive Behavioral Therapy (CBT) group therapy program based on the "Thinking, Feeling and Behavior" triad (Beck and Beck, 2011) may help young women to reset the cycle of negative self-talk and emotions leading to non-salubrious behaviors.

Mindfulness practice combined with the cognitive behavioral skill building (CBSB) group program, termed COPE (Creating Opportunities for Personal Empowerment) Healthy Lifestyle TEEN (Thinking Emotions, Exercise and Nutrition) was designed to mediate mental health symptoms and weight gain in youth (Lusk& Melnyk, 2011; Melnyk, et al., 2013; Melnyk, 2002; 2009). Teaching mindfulness to young women with depression may help to provide short-term emotional relief**.** Mindfulness can help the adolescent to observe and not judge negative thoughts and emotions and refocus attention to the "now"; an important step in learning how to regulate emotions. The relaxation response, relaxing mind and body in tandem (Mind, Mood and Memory, Sept. 1st, 2018; Altman, 2018; Sears, 2017), provides additional tools for managing distress, regulating mood, and contributing to more enduring healthier behavior choices.

Problem statement

Psychiatric illness frequently begins before the of age 14 (Child Mind Institute, 2015; Merikangas et al., 2010). Depression, especially among female adolescents, is rising (Youth Risk Behaviors, CDC, 2018). Depression places adolescents at a significant risk for engaging in non-salubrious behaviors, which can compromise current and future emotional and physical health, overall quality and longevity of life (Avenevoli, et al., 2015; Nemiary, et al., 2012). Depressed female adolescents with poor coping tools to regulate emotions may act impulsively, which is a major risk factor for suicidality (Swahn, 2009; Center for Advancing Health, 2009; Marmorstein, et al., 2014; Nemiary, et al., 2012). Emerging and untreated depression may impact the young person's path to becoming a fully functioning and contributing member of society; chronicity of illness that continues throughout adulthood adds to the global economic health burden (Lee, et al., 2014). Group treatment offers unique therapeutic benefits (Arias-Pujol & Anguera 2017; Klingle & Van Vliet, 2017; Pingitore & Ferszt, 2017), helping adolescents feel more connected, less isolated, (Ditzen & Heinrichs, 2014) and affording interpersonal engagement and ways of discovering compassion for self and others. (Bluth & Blanton, 2014, 2015). Learning to reframe negative thoughts and employ positive thinking and healthy lifestyle strategies (Lusk & Melnyk, 2011; Melnyk, et al., 2013, McCarty et al., 2007) has also been achieved in group CBSB programs. Teaching mindfulness (Kallapiran, Koo, Kirubakaran & Hancock, 2015; Carsley, Khoury, & Heath, 2018) has revealed the benefits of regulating emotions and improving ability to manage stress (Zoogman, Goldberg, Hoyt and Miller, 2015). Mindfulness may even foster healthier neurobiological pathways that could have lifelong benefit (Lee et al., 2014; Ahmed, et al., 2015; Wekerle, Waechter, Leung & Leonard, 2007).

Group therapy can be impactful and an efficient way to deliver care (Hart- Abney, Lusk, Hovermale & Melnyk, 2018; Pingitore & Ferszt, 2017; Tanofsky-Kraff et al., 2014). There is an urgency right now to connect impactful interventions that may moderate depression in young women. Mindful BALANCE will innovatively combine CBSB with mindfulness and explore the clinical outcomes on depression and anxiety.

Program Objectives

COPE (Melnyk, 2002; 2009) is geared toward helping youth obtain improved emotional health while educating on healthy lifestyle behaviors (Appendix A). The concept of mindfulness, focusing on the here and now through very short focused activities, is touched upon in the COPE group lessons. Within Mindful BALANCE, the practice of mindfulness will become a key component following the weekly (CBSB) modules. Mindfulness practice may augment the treatment benefits of COPE and teach participants to regulate their moods when struggling with intense negative emotions. Mindful BALANCE seeks to answer the following questions, aims and objectives.

Research Questions

1. Will the COPE empirically tested group CBSB program combined with an extended mindfulness group component be sustainable for a 7-week duration?

2. Does the COPE empirically tested group CBSB program combined with an extended mindfulness group component attenuate symptom of depression in a female depressed adolescent population?

3. Does the COPE empirically tested group CBSB program combined with an extended mindfulness group component attenuate symptom of anxiety in a female depressed adolescent population?

Study aims

1. Determine subject adherence - if adolescents would enroll and participate in a two-hour evening group program weekly for seven weeks combining COPE with a group mindfulness practice.

2. Examine the effect on depression in non-suicidal female adolescents.

3. Evaluate the effect on anxiety in non-suicidal female adolescents.

4. Evaluate anthropometric and vital signs as health indicators in the non-suicidal female adolescent population.

5. Evaluate if mindfulness is viewed positively and considered helpful for reducing stress.

Research objectives

1. Mindful Balance running at 75% capacity for seven weeks would be evident of sustainability.

2. Lower pre-post PHQ-9 scores would indicate improvement in depressive symptomatology.

3. Lower pre-post GAD-7 scores would indicate improvement in anxiety symptomatology.

4**.** Gathering data on other aspects of well-being including vital signs, height and weight identifies additional health indicators**.**

5**.** Mindfulness reported favorably and stress reducing indicates a positive response.

Review of Literature

Early adolescence can be a particularly vulnerable time (Broderick & Jennings, 2012) due to a myriad of neurobiological, hormonal and physical changes (Sanderson, Patton, McKercher, Dwyer, & Venn, 2011; Nemiary, et al., 2012; Lee et al., 2014). Social, academic, family and "electronic age" stressors impact upon mood and increases the chance that a susceptible adolescent may experience the symptoms of anxiety and depression (Becker, Alzahabi & Hopwood,2013; Michigan State University, 2012; Wu, Kirk, Ohinmaa, & Veugelers,2017). The Surgeon General's Report in 2011 stated that one in five youth experience significant psychiatric or behavioral issues and over 8% of adolescents (ages 12-17) suffer from major depression (Murthy, 2015). Less than half of these depressed youth will ever receive any type of treatment (Child Mind Institute, 2015). In the United States, despite the strong need for treatment and the greater appreciation for earlier treatment within a pediatric population to thwart chronic psychiatric illness and long-term disability (Cummings, 2014; Merikangas, Mendola, Pastor,Reuben, & Cleary, 2012) , only 1% of depressed adolescents manifesting the initial of signs of a mood disturbance are treated in outpatient mental health facilities annually (Avenevoli, et al., 2015). Ninety percent of youth who end their own lives have a psychiatric illness, and suicide is the third leading cause of death in the population aged 10-24 (Child Mind Institute, 2015; Canady, 2015).

Between ages 13 -15, there is an upsurge in the rate of newly diagnosed cases of depression in female adolescents leading to a two-fold increase by age 15-18, when compared with their male same-age counterparts (Wu et al., 2017; Hankin, et al., 1998; Saluja et al., 2004). According to Meikangas et al. (2010), mood and anxiety disorders are more prevalent in female populations and symptoms in adolescence generally begin between the ages of 11 through 14,

with a steady increase in depression as the adolescent matures (Avenevoli, et al., 2015). Female adolescents have been found to be more self-critical than their male counterparts (Klingle & Van Vliet, 2017; Bluth & Blanton, 2014). Females may engage in non-salubrious behaviors, such as eating excessive non-nutritious snack foods, or napping excessively after school, not knowing other ways to relieve stress or distract themselves when feeling internal distress. An inability to self-regulate difficult emotions has been correlated with greater risk for developing internalizing (i.e. depression/anxiety) and externalizing (i.e. isolating, behavioral/interpersonal difficulties, disordered eating) behaviors (Gowey, et al., 2016; Lee et al., 2014; Platt, Kadosh,& Lau, 2013, Nemiary et al., 2012). Dockray et al. (2009) postulate the Hypothalamic-Pituitary-Adrenal Axis System may become more activated in young females, especially for those who perceive themselves as having minimal social support (Ditzen & Heinrichs, 2014). Depressed females may be less motivated to engage in daily exercise or other physical activity, which helps self-regulate emotions. Depression therefore may enhance the risk of weight gain if the female adolescent experiences feelings of low energy and inactivity is pronounced (Luppino, et al., 2010) and may put her at risk for cardiovascular disease, further compromising physical health (Harvard Health Publications, 2012). Therapeutic interventions may be particularly critical for young women exhibiting any of the identified signs of depression including low moods, isolation, irritability, anhedonia, sleeping pattern disturbances, excessive or diminished eating behaviors, low motivation and, if severe, thoughts of one's own demise (Avenevoli, et al., 2015; American Psychiatric Publ.,2013; Kessler, et al., 2012; Merikangas et al., 2011)**.** Addressing symptoms of depression promptly in the female adolescent may have significant benefit to attenuate future morbidity.

McCarty et al. (2007) in a meta-analysis on the impact of psychotherapy treatments for depressed children and adolescents postulated interventions focusing on enhanced relationship-building, reframing negative thoughts and utilizing behavioral motivation strategies to self-monitor their mood and behaviors were particularly impactful. Family systems were also found to be central forces promoting social, physical and emotional health for adolescents (Michaelson, Pickett, King and Davison, 2016; Van Ryzin & Nowicka, 2013). During the vital window of early adolescence, where neurocognitive development is evolving (Lee et al., 2014; Ahmed, et al., 2015), social support (Ditzen & Heinrichs, 2014) in the form of group treatment may be the key intervention necessary to help depressed young women (Pingitore & Ferszt, 2017; Tanofsky-Kraff, et al., 2014; Nemiary, et al., 2012; Melnyk,et al., 2006 ; Saluja, et al., 2004). Female adolescents who are able to regulate their emotions and nutritional intake, maintain a more positive cognitive outlook, and seek out healthier "go to" activities before they reach young adulthood have a much better chance of having healthier life trajectories (Anderson, Cohen, Naumova, Jacques & Must, 2007; Fabricatore, et al., 2011; Gowey, et al., 2016; Gouveia, Canavarro & Moreira, 2019).

Cognitive Behavioral Therapy

The COPE program based on the "Thinking, Feeling and Behavior" triad (Beck & Beck, 2011) asserts when adolescents begin to think more positively about themselves and their lives, there is a positive impact upon their emotions leading to more proactive and healthier behaviors (Naar-King & Safren, 2017; Beck & Beck, 2011). COPE is geared toward helping youth obtain improved emotional health while educating participants on healthy lifestyle behaviors (Melnyk, et al., 2006). COPE is designed to be easily administered after an online training course (Melnyk, 2002; 2009) and has been incorporated into numerous research studies in schools and colleges,

as well as traditional mental health and medical settings (Melnyk, et al., 2006; Melnyk, et al., 2007; Kozlowski, Lusk & Melnyk, 2015; Hart Abney, et al., 2018). The COPE program is administered for 15 weeks, (Melnyk, et al., 2013) with the final 8 sessions emphasizing exercise, nutrition and wholesome mood enhancing behaviors, or for 7-weeks, reviewing these topics with a primary CBT focus (Erlich, Li, Li, Dillon, & Becker, 2019; Hart Abney, et al., 2018; Lusk & Melnyk, 2011). Over the past 15 years, COPE has been empirically tested (Melnyk, et. al., 2007; Kelly, Melnyk, Jacobson & Ohaver, 2011; Lusk & Melnyk, 2012; Hoying & Melnyk, 2016) and shown to be helpful in diminishing symptoms of depression and anxiety in youth with mild to moderate symptoms (Hoying & Melnyk, 2016, Hoying , Melnyk & Arcoleo, 2016), and the ability to mediate symptoms with more severe mood and anxiety symptomatology (Melnyk et al., 2013; Hoying & Melnyk, 2016). In youngsters endorsing lower self-esteem, depression and suicidal ideation (Hoying & Melnyk, 2016) prior to the CBSB program (Lusk & Melnyk, 2013; Melnyk et al., 2013), the intervention has had a strong positive *p*-value mitigating weight gain and improvement in symptoms of depression at the time of the program completion (Melnyk et al., 2006; Lusk & Melnyk, 2013; Melnyk, et al., 2013). COPE appears to trend positively to influence long-term healthy lifestyle behaviors although more longitudinal studies are necessary (Melnyk, et. al., 2007; Melnyk, et al., 2009; Kelly, Melnyk, Jacobson & Ohaver, 2011; Lusk & Melnyk, 2012; Hoying & Melnyk, 2016).

Group therapies such as COPE have been shown to help promote interpersonal relationships (McCarty et al., 2007; Arias-Pujol & Anguera, 2017; Klingle & Van Vliet, 2017; Pingitore & Ferszt, 2017). Adolescents experience reduced stress when supportive bonds are achieved which may benefit their physiological health (Bluth, et al., 2016; Ditzen & Heinrichs, 2014). COPE and COPE TEEN (Lusk & Melnyk, 2011; Melnyk, et al., 2013; Hoying, et al.,

2016), in both the full and abridged versions, have been shown to be engaging and enjoyable for youth (Lusk & Melnyk, 2013; Hoying, et al., 2016) with low attrition rates. Melnyk et al. (2007) noted urban youth had a higher attrition rate when the program was run at the end of the school day, suggesting an in-school intervention would be more efficacious (Hoying & Melnyk, 2016; Melnyk, et al., 2007; 2009). COPE delivered either during or after school hours, in mental health or medical clinics, (Hoying, et al., 2016; Kozlowski, Lusk, Melnyk 2105; Lusk & Melnyk, 2013; Lusk & Melnyk, 2012; Lusk & Melnyk, 2011; Melnyk, et al., 2009) has generally been well attended and received by youth from all socio-economic backgrounds (Lusk & Melnyk, 2012; Lusk & Melnyk, 2013). Additionally, components of mindfulness incorporated into the CBSB and healthy lifestyle component of the COPE abridged and 15-week programs (Lusk & Melnyk, 2013; Melnyk, et al., 2013) to assist with mood regulation and managing stress (Hoying, et al., 2016; Hart Abney, et al., 2018) were rated as helpful ways to learn to regulate strong negative emotions (Melnyk, et al., 2013; Hoying & Melnyk, 2016, Hoying et al.,2016).

Mindfulness

Mindfulness practice is gaining more attention for its homoeopathic abilities to diminish symptoms of anxiety and depression in adults (Baer, 2010; Mariano, 2009). Zoogman, et al., (2015) explored all the current studies conducted on youth utilizing mindfulness practice between 2004 and 2011 and concluded that mindfulness shows promise to stabilize mood and emotion regulation. Numerous studies looked at a general adolescent population (Broderick & Metz, 2009) with more recent studies exploring the high-risk adolescent school and mental health outpatient populations (Tan & Martin, 2015; Eva & Thayer, 2017**)**. Ongoing research (Kallapiran, et al., 2015; Rathus & Miller, 2015; Rathus, et al., 2018) demonstrates how teaching mindfulness to youth may be beneficial to manage stress and strong negative emotions

with the goal of gaining control of strong feelings and urges without impulsive actions (Rathus & Miller, 2014 ; Rathus, et al., 2018). Mindfulness embodies intentionality, being present and fully cognizant of what is happening in the moment both externally and internally for the individual (Broderick & Jennings, 2012). Being in the "now" non-judgmentally may help adolescents become more attuned and aware of their feelings. This awareness alone may aid in learning better abilities to modulate and regulate emotions (Roeser & Pinela, 2014; Brown, Ryan & Creswell, 2007). Practicing mindfulness can give adolescents the capability to develop an internal resource to manage stress, improve mood, and diminish both physical and/or emotional pain (Johnstone, et al., 2016; Allen, Wren, Anderson, Sabholk, & Mauro, 2018).

Bluth and Blanton (2014) have explored how exposure to mindfulness practice may offer adolescents a mechanism to turn off self-judgments and tune-out negative thoughts and fosters self-compassion (Bluth & Blanton, 2014,2015). The association between mindfulness and self-compassion is conceptualized as having a probable bio-directional link (Bluth & Blanton, 2014) and correlated to experiencing empathy and a greater connectivity to others (Roeser & Pinela, 2014; Neff & Germer, 2013). Experiencing social connection has been found to cushion and protect against the physiological stress response during periods of negative emotions and positively impact anthropometric markers (Neff & Germer, 2013; Ditzen & Heinrichs, 2014; Bluth et al., 2016; Klinge & Van Vliet, 2017). Adolescents feeling more connected to others have endorsed higher levels of enjoyment in their lives (Bluth & Blanton, 2015).

Despite the additional interest and potential benefit to exposing adolescents to mindfulness-based stress-reduction techniques, there is still a paucity of studies looking at youth suffering from psychopathology who might benefit from employing mindfulness practice into their lives (Zoogman et al., 2015). The need for ongoing studies (Bluth et al., 2016; Bluth &

Blanton, 2014; Tan & Martin, 2015) and the probable value of targeting mindfulness interventions to younger adolescents is acknowledged; whose maturing and developing brains may be particularly receptive to the benefits (Gouveia, et al., 2019; Shin, Black, Shankoff, Riggs & Pentz, 2016; Roeser & Pinela, 2014; Lee, et al., 2014). Mindfulness therefore may be an untapped resource (Melnyk, et al., 2009; Broderick & Jennings, 2012; Zoogman, et al., 2015; Johnstone, et al., 2016) especially for clinical populations of youth manifesting mild, moderate or severe depression.