Examining the Relationship of a Four Week Mindfulness Based Stress Reduction (MBSR) Workbook Training with College TRIO Student Support Services Participants, and Staff on Perceived Stress and General Well-being

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Abstract

TRIO Student Support Services (TRIO SSS) participants are college students comprised of first-generation college students, low-economic status, disabled or Veteran students, and are identified as high risk for not completing their college education. Stress has been identified as the number one barrier to academic success for college students (Oman, Shapiro, Thoresen, Plante & Flinders, 2008). The purpose of this quantitative study is to examine the effects of a four week Mindfulness Based Stress Reduction workbook training on perceived stress and overall well-being. The study hypothesizes there is a significant relationship between MBSR training and decreased perceived stress, and an increase in general well-being for participants. The study sample engaged consists of no more than 50 self-selecting individuals 18 years of age or older participating in or employed in, a college TRIO Student Support Services program at an Idaho college. This study utilized the Perceived Stress Survey (Sheldon Cohen, 1983) and the Well-being Survey (National Center for Health Statistics, 1971) given as pre and posttests to identify the possible relationship of MBSR to perceived stress and overall well-being.

Keywords: College Students, MBSR, Mindfulness, Perceived Stress, Stress, TRIO, Wellbeing.
Examining the Relationship of a Four Week Mindfulness Based Stress Reduction (MBSR) Workbook Training with College TRIO Student Support Services Participants, and Staff on Perceived Stress and General Well-being

TRIO Student Support Services (TRIO SSS) participants are college students comprised of first-generation college students, low-economic status, disabled students, and are identified as high risk for not completing their college education. In a 2004 survey, stress was cited by one-third of fifty-thousand students surveyed, at seventy-four U.S. college campuses as the number one barrier to academic success (Oman, Shapiro, Thoresen, Plante & Flinders, 2008). Because stress can adversely affect physical and mental health, the American College Health Association has identified “increasing students ability to cope with stress” as one of their high-priorities (Oman, et al., 2008). TRIO SSS students are at even higher risk for stressors impeding their academic persistence, resulting in lower graduation rates than their peers, and are not commonly offered interventions to address coping with the stressors of the college experience. This study will look at utilizing Mindfulness Based Stress Reduction (MBSR) as an effective intervention to mediate stress (Woosley & Shelpler, 2011).

Historical and Social Context

Researchers such as Woosley & Shelpler (2011), report that of first-generation college students who attend four-year institutions only 47% successfully complete their bachelor’s degree compared to 78% of graduates with a parent who had achieved a four year degree. Additionally only 24% first-generation degree earning college students do so within eight years of initial enrollment. Students of low socio-economic status (SES) postpone entry into college by two years or more upon completion of high school (Rowan-Knyon, 2007). Mindfulness Based Stress Reduction (MBSR) interventions were found to be impactful when integrated in academic
curriculum in reducing mental distress, increasing self-compassion, well-being and overall success (Bergen-Cico, et al., 2013). Christopher & Maris (2010), advised the use of MBSR with college students to reduce burnout and increase self-care.

Student Support Services (SSS) program is one of the original three federal TRIO programs created in 1968, authorized by the Higher Education Act of 1965 to provide extra support to these low-income, first-generation, and disabled students who showed academic need. Risk for not completing college has been studied for many years. Lee, Wuertz, Rogers & Chen (2013) report that stress has been studied for more than two centuries, linking stress and poor health. Researchers elaborate further, indicating that stress and sleep problems are “inextricably linked and affect health and well-being” (Lee, et al., 2013). This linkage has been studied and found that prolonged exposure to stress and individual perceptions of stress can escalate into fatigue and exhaustion. Exhaustion may result in students not attending classes, failing to do well on assignments, and tests and possibly quitting school entirely (Law, 2007; Palmer et al., 2014).

The National College Health Assessment (NCHA) study of 2008 showed that the number of students who reported experiencing emotional distress had doubled from 2000 to 2008 and that less than 20% of those individuals sought counseling (Bergen-Cico, Possemato, & Cheon, 2013). Leaving 80% of students struggling to cope on their own without support or resources.

Most recent data from the U.S. Department of Education indicates that in the 2013-2014 school year, 204,756 students were served through TRIO SSS in the United States at an average of 197 students per college. These students are all receiving federal grant funding to pay for college, and many are taking out student loans as well. The impact of stress on this population of
students place, the individual student, their families, and larger society in a position to have a powerful impact on their respective economies.

Federal Student Aid, a part of the U.S. Department of Education, is the largest provider of student financial aid in the nation. In 2017 the department reported awarding over 26 billion dollars in grants for the fiscal year 2016-2017, serving over 7 million students. Based on an average per student rate of $3,655.97 per year, and with 204,756 TRIO students served in 2013-2014, United States tax payers are investing over 748 million dollars into these high risk students, not to include loans or other financial programs they may utilize. The social impact implicated here does not capture the total number of students considered high risk, only those students enrolled in TRIO SSS. Implications to larger society are therefore in areas such as individual and family earning potential, workforce competency, future tax revenue and future safety net utilization (Dwyer, 2012; Everett, 2015).

**Theoretical Framework**

The transactional stress model was first introduced by Robert Lazarus in 1966. Over the past 30 years, Robert Lazarus has built a wealth of information upon that foundational framework. Most recently he worked with Susan Folkman to further strengthen this theory. Within the transactional stress theory is a, person in environment, as well as, a systems approach. Stress is viewed as an ongoing transactional system between an individual and their perceptions of stress and an environmental stressor. A threat or stress cannot exist in the environment without an individual to perceive it as such, and how that threat or stress is perceived is highly individual to a single person. “The person environment relationship is mediated by two key processes: cognitive appraisal and coping.” (Folkman & Lazarus, 1987). Not all of this process is of the
conscious mind therefore, this highly researched complex theory of stress, in its entirety, is beyond the scope of this literature review.

This study focuses on student stress from the basic transactional theory that, stress is viewed as an interaction occurring amid a single person and their environment. The interaction initiates cognitive evaluation of the experience’s importance, evaluation of the consequences of the event and what coping behaviors to employ to adapt or manage the demands of the experience.

**Related Literature**

Additional literature reviewed includes researchers who investigated the diversity of the TRIO SSS population, barriers faced, stressors identified and academic completion. Researchers include Graham (2011), Jehanger (2008), Woosley and Shepler (2011). We will look at the Transactional Stress Theory introduced by Lazarus and expanded on by Lazarus and Folkman (1987), Everett (2013), and Ishitani (2013). We reviewed volumes of research about both the positive and negative aspects of stress with the general population. Specifically with college students, low-SES students, first generation college students and disabled students as presented by Conley, Travers, and Bryant (2013), Frey (2015), Oman et al., (2008), Jenkins, Belanger, Connally, Boals, and Duron (2013), Palmer et al., (2014), and Thomas, Raynor & Bahussain, (2016). Finally we explored the various methods of stress reduction, specifically MBSR as we review research by Bruno and Frey (2015), Kabat-Zinn (2012), Panda (2014), Strauss, Cavanagh, Oliver, & Pettman (2014). Finally we focused on MBSR with college students and TRIO SSS student population, specifically through Bergen-cico, Possemato, and Cheon (2013), Ching, Koo, Tsai, and Chen (2015), Diaz, Jimenez, and Lopez (2014), Oman, Shapiero, Thorenson, Plamle and Flinders (2016).
Problem Statement

TRIO SSS participants are students that are identified as at high risk for not completing their college education. TRIO SSS students are at even higher risk for stressors impeding their academic persistence, resulting in lower graduation rates than their peers, and are not commonly offered interventions to address coping with the stressors of the college experience (Woosley & Shelpler, 2011).

Purpose Statement

The purpose of this quantitative pre-experimental study is to examine the relationship between Mindfulness Based Stress Reduction workbook training and stress as well as general well-being among TRIO SSS students and faculty at an Idaho college. The dependent variable is defined as stress and well-being and the independent variable as MBSR workbook training.

Significance of the Study

The benefits of this study for participants may be a reduction of perceived stress and an increase in overall wellbeing. The benefits for future students, staff and mentors maybe created by knowing the participants experience of engaging in this examination and of the effects of this process. The benefits for society could be that participants and anyone who receives MBSR training may be able to manage perceived stress and wellbeing through the application of the MBSR technique (Kabat-Zinn, 2012). These improvements in turn may lead to increased coping, sustained persistence and completion of academic pursuits. Again, benefits to larger society are greater workforce competency, increased tax revenue and reductions in future safety net utilization (Dwyer, 2012; Everett, 2015).

Research Questions

The following research questions were proposed:
RQ1: What is the relationship between Mindfulness Based Stress Reduction workbook training and perceived stress in TRIO Student Support Services participants and staff at a college in Idaho?

RQ2: What is the relationship between Mindfulness Based Stress Reduction workbook training and general well-being in TRIO Student Support Services participants and staff at a college in Idaho?

Hypotheses

H1: There is an inverse relationship between Mindfulness Based Stress Reduction workbook training and stress.

H2: There is a positive relationship between Mindfulness Based Stress Reduction workbook training and general well-being.

Null Hypotheses

The following null hypotheses are proposed:

Ho1: There is no relationship between MBSR training and perceived stress for College TRIO Student Support Services participants and staff at a community college in Idaho.

Ho2: There is no relationship between MBSR training and well-being for College TRIO Student Support Services participants and staff at a community college in Idaho.

Definitions

The following definitions are used for this study:

1. Stress is defined as “a state of threatened or perceived by the individual as threatened homeostasis and it is re-established by a complex repertoire of behavioral and physiological adaptive responses of the organism (Panda, 2014).

2. General Wellbeing is defined as it is operationalized by the General Well-being Scale
developed by the National Center for Health Statistics (1971). The GWB schedule is a self-report instrument designed to assess selected aspects of self-representations of subjective well-being and distress.

3. Mindfulness is defined as “awareness, cultivated by paying attention in a sustained and particular way: on purpose, in the present moment, and non-judgmentally (Kabat-Zinn, 2012).

4. Grant - Financial aid, often based on financial need, which does not need to be repaid (unless, for example, you withdraw from school and owe a refund).

**Review of Literature**

This literature review looks at stress, stress and learning, Mindfulness Based Stress Reduction (MBSR) and MBSR with College students. This review looks at some positive aspects and negative aspects of stress. It examines the psychological and biological effects of stress on learning, how stress is experienced by college students, and specifically the TRIO Student Support Services (SSS) population. Next, this review looks at MBSR as an evidence based practice for reducing the negative effects of stress, followed by a review of what the existing research of MBSR utilized with college students shows. Finally this literature review concludes with a brief discussion of the purpose of the review.

**Review of stress**

Stress research, as we currently understand it began with a physiologist, Dr. Walter Cannon in 1929. Dr. Cannon presented the idea of a human’s natural “fight or flight response.” Cannon found that when an individual was exposed to an external event, that the mind perceived as a threat, the body responded by triggering a physical chemical reaction to mobilize the body to respond, either by fighting the threat or fleeing from it. He noted the changes in breathing, heart rate, skin, and blood flow. These threats or stressors, once identified or perceived, elicit an
involuntary response which includes the spinal cord and cranial nerves and then the autonomic nervous system (Frey & Davidson, 2015; Grable, 2015; Guo, Wang, Johnson & Diaz, 2011; Lazarus & Folkman, 1987; Yancura, 2016). Grable (2015, p 1539) describes the process as:

“When a person experiences a stressor event, it is processed through the brainstem, then to the limbic system and if the stressor is negative the limbic system cuts off information that might lead to slower higher-order mental processing and immediately puts the body into this fight or flight response.”

Next, in 1956, Hans Seylle expanded on Cannon’s research and presented the General Adaptation Syndrome (GAS) as a three phases: Alarm, resistance, and exhaustion. Seylle described this process as the body energizing and preparing for the emergency. Next the body attempts to balance or adapt to the chemical response, and if there is no reduction in the chemical instructions the brain has given to the body, it results in exhaustion and a negative disease process is triggered. Therefore, stress is viewed as both a positive potentially lifesaving natural system; however, when the balance is not restored within a short period of time, stress becomes a negative influence on both the mind and body (Frey & Davidson, 2015; Grable, 2015; Guo et al., 2011; Lazarus & Folkman, 1987; Yancura, 2016).

Stress on a body is clearly linked, through research, to poor health as well as poor mental health (Conley, Travers & Bryant 2013; Frey & Davidson, 2015; Llamas & Ramos-Sanchez, 2013; Yancura, 2016). Richard Lazarus began conducting psychological stress research focusing on what mediates the factors of stress. Lazarus proposed that the mental appraisal and subsequent coping behaviors were key to understanding the person and environment transactions (Frey & Davidson, 2015; Grable, 2015; Guo et al., 2011, Lazarus & Folkman, 1987; Yancura, 2016). The transactional model focuses specifically how the stress response is a highly
individual perception process. Ultimately the transaction between the environmental stressor, the individual’s appraisal, and the selection of a coping behavior, are all within the person’s belief system, and personal resources are a key element in the process. This theory indicates that we can influence and intervene on the stress (Frey & Davidson, 2015; Lazarus & Folkman, 1987; Yancura, 2016).

**Positive aspects of stress**

Palmer et al. (2014) as well as Bruno and Frey (2015) found that stress can help focus attention, improve memory, and even increase retrieval, under short term exposure. These benefits can be seen until an individual experiences prolonged exposure to stress leading to fatigue. Research has shown that stress can lead to resilience, and strengths as well as improvements in functioning under stress. This same stress is vital to learning, and the college experience (Frey & Davidson, 2015; Law, 2007; Palmer et al., 2014).

**Stress and college students**

By its very nature, the pursuit of a college degree establishes sustained levels of stress, yet stress is a vital part of the college experience (Guo et al., 2011). Unfortunately, this academic stress often leads students to skip classes, get low grades on assignments and tests, and quitting school entirely. Heightened and sustained stress levels, and the related stress hormones, have a negative impact on acquiring and sustaining new information, and mental processing (Broton & Goldrick-Rab, 2016; Conley et al., 2013; Law, 2007; Osam & Cumberland, 2017). Palmer et al. (2014) showed how perceived stress interferes with mental processing tasks as well as nearly all aspects of memory, retention, and recall. Consequences of stress often manifest in cognitive operational deficits. Stress reduced focus, critical thinking, and the problem solving skills that are critical to college student’s educational success (Casillo, Zahn & Cano, 2012; de
Carvalho, Gadzella, Henley & Ball, 2009; Law, 2007; Osam & Cumberland, 2017; Palmer et al., 2014).

**TRIO college student populations and stress**

TRIO SSS college student populations are comprised of first generation college students, low socioeconomic status (SES) individuals, disabled persons, and Veterans. Included within these general categories is an even wider range of students who are historically marginalized, oppressed, and living in poverty (Woosley & Shepler, 2011). These students include: Racial and ethnic minorities such as Latino, Asian, African American and first generation immigrants, single parents and other non-traditional students (Castillo et al., 2008; Guo et al., 2011; Jenkins, Belanger, Connally, Boals & Duron, 2013; Llamas & Ramos-Sanchez, 2013; Palmer et al., 2014; Yancura, 2016). In addition to the general college stressors experienced by college students, many of these students experience acculturation stress. The transition from family life to college life often results in this type of stress. These students experience a lack of social supports while in college and pressures from their families to continue to behave in ways that maintain the family’s culture, traditions and values. Many of them experience deficits in both financial and emotional resources (Jenkins et al., 2013). First-generation students, Latino, Asian and African American students report increased stress with a lack of support when navigating the various systems within college. Usually this stress occurs, because they do not have people in their social network to advise them about the college experience. Racial and ethnic minorities, Low SES, disabled students and Veterans all report experiencing more stress and frustration than the general college student population (Castillo et al., 2008; Guo et al., 2011; Jenkins et al., 2013; Llamas & Ramos-Sanchez, 2013; Palmer et al., 2014; Yancura, 2016). Guo et al. (2011) reported economic stress as the number one stressor for this population.
Anxiety about money, food insecurities, poor physical health and sleep deprivation are example of the major stressors reported. Sleep deprivation will affect health and well-being that further negatively impacts learning, performance and mood (Broton & Goldrick-Rab, 2016; Lee, Rogers & Chen, 2013; Conley et al., 2013). Female students’ report more sleep difficulties, perceived stress, and conflict from multiple role demands i.e. school, work, family (Lee et al., 2013; Osam & Cumberland, 2017). Dwyer et al. (2012) found the cost of college is related to increases in stress, and when individual student debt from loans increases beyond 11 thousand dollars, the dropout rates consistently increase. These stressors are shown to reduce grade point averages and college completion rates (Broton & Goldrick-Rab, 2016; Dwyer et al., 2012).

Dwyer et al. (2012) reports that students who are employed over 20 hours a week, or have kids or maintain a part time enrollment status are all less likely to graduate. Finally, Conley et al. (2013) found that colleges offer minimal resources for mental health problems, and even where it is available, only 10% of students report utilizing it.

**Mindfulness based stress reduction**

MBSR was developed by Jon Kabat-Zinn, drawing from the Buddhist meditation tradition and hatha yoga. The original purpose introduced in 1982 was to help individuals manage chronic pain. In the 1990’s, Kabat-Zinn showed how the same intervention could be utilized for stress and depression. The official MSBR program, created by Jon Kabat-Zinn, consists, of eight sessions. Two and a half hours, once a week, with a full day session during the sixth week. These therapeutic sessions are conducted in groups of up to 30 people. Every session has three segments: the body scan, sitting meditation, and hatha yoga. (Baer et al., 2012). Attendees are instructed to utilize pre-recorded meditations 45 minutes per day, six days a week to cultivate the habit of mindfulness in their everyday life. As they practice at home it is
suggested that they will utilize the mindfulness skills while conducting everyday activities like eating, driving and exercise (Baer et al., 2012).

MBSR is most productive in decreasing stress than anxiety. Jain & Singh (2016) reported that MBSR produced the greatest effect for those individuals who practiced mindfulness daily. Individuals who reported daily practice also reported dealing with conflict better and reacting to stressful situations more emotionally responsible. Diaz et al. (2014) found individuals who practiced mindfulness reported improved health and coping. Noting that these outcomes were for a modified MBSR program, Diaz et al. (2014) found these results to be short term and that longitudinal studies needed to be conducted to measure long term effects. Research outcomes consistently recommend MBSR only as a complimentary treatment for those with clinical diagnosis (Goldin & Gross 2010; Goldin et al., 2016). Frey & Davidson (2015) indicated that meditation results in a clear connection between stress and resilience.

Mindfulness based stress reduction and college students

MBSR is consistently found to be successful in reducing the negative effects of stress. Benefits of MBSR with college students was reported by Conley et al. (2013) to result in higher attendance and greater student engagement. Those outcomes were for those students who reported practicing the meditation as opposed to those who experienced just learning about the practice from a book. Oman et al. (2008) reported the control group in their study, those who received MBSR showed statistically significantly larger reductions in perceived stress, reduced rumination and these results were still apparent sixty (60) days later. Bodenlos, Noonan, Stephanie & Wells (2013) report Mindfulness is related to improved emotional well-being and social functioning with adolescents and that MBSR “reduced psychological distress, anxiety, and
perceived stress in college students” (p.375). This study indicates, younger students transitioning to college may be able to mediate acculturative stressors with MBSR.

Bergen-Cico, et al. (2013) find it useful to incorporate into educational curriculum to bolster student success, increase well-being, self-compassion, and reduce mental distress. Christopher & Maris (2010) support these findings by recommending incorporating MBSR into student curriculums to reduce burnout and improve self-care during college and in future healthcare careers. In both general population and those diagnosed with mental health disorders, study results indicate steep reductions in stress reactivity in self-reports and through a wide variety of standard measures (Bergen-Cico et al., 2013; Hodge et al., 2014; Shapiro et al., 2011; Thomas, Raynor & Bahussain, 2016). Bergen-Cico et al., (2013) warns that students experiencing anxiety may require sustained practice of this type of intervention to experience substantial outcomes.

**Purpose of review**

An overwhelming amount of evidence exists through scientific research that college students need psychoeducation with regard to stress, stress management, acculturation, and how to mediate the effects of stress. Many researchers indicate that colleges should require psychoeducation for students as a preventative measure, that would lead to increased graduation rates and wellness that could carry on throughout the student’s lifetime (Castillo et al., 2008; Conley et al., 2013; Guo et al., 2011; Osam & Cumberland, 2017; Palmer et al., 2014). Helping first generation students obtain their educational goals is economically beneficial for both the individual and for society (Dwyer et al., 2012; Everett, 2015). As an evidence based practice MBSR may help college students, reduce the negative effects of stress. The societal savings of group mindfulness training could have significant financial benefit for the individual student,
families, and society who is currently supporting students through grant funding and student loan debt (Kearney, McDermott, Malte, Martinez, and Simpson, 2012).

**Literature Review Summary**

Stress is directly linked to poorer mental and physical well-being. (Frey & Davidson, 2015; Grable, 2015; Guo et al., 2011; Lazarus & Folkman, 1987; Yancura, 2016). Analysis of stress as transactional process between the individual person and their environment indicates individuals can mediate the stress effects on the mind and body. The stress appraisal process, and subsequent choice of coping behavior the individual utilizes in the stressful situation, can be mediated by utilizing MBSR techniques. When MBSR is practiced consistently by College students, they may increase attention, cognition, cognitive flexibility and academic performance (Ching et al., 2015). Development of an individual’s awareness of ones thoughts and developing non-judgement may moderate threat or stress perceptions in the transactions of person and environment (Diaz et al., 2014; Hou, Ng & Wan, 2015; Jain & Sing, 2016; Santarnecchi et al., 2014).

**Methodology**

An abundance of researchers are recommending colleges implement stress management programs for college students to increase coping skills and graduation rates (Castillo et al., 2008; Conley et al., 2013; Guo et al., 2011; Osam & Cumberland, 2017; Palmer et al., 2014). Most college TRIO Student Support Services programs do not offer stress management as part of their supportive services. This study uses pretest and posttest surveys to attain quantitative pre-experimental data of the relationship between participation in a four week Mindfulness Based Stress Reduction workbook training, perceived stress, and overall well-being. The study sample consists of self-selecting individuals, currently participating in, or employed in, a college TRIO
Student Support Services program at an Idaho college. Participants voluntarily attended a four week Mindfulness Based Stress Reduction workbook training and completed the pretest and posttest surveys from February 5, 2018 to March 5, 2018. After the data was collected, the data analysis was performed utilizing Microsoft Excel.

**Research Design**

The research design for this study is a quantitative pre-experimental study that utilizes a pretest and posttest to assess the relationship between participation in a Mindfulness Based Stress Reduction workbook training, perceived stress and general well-being as operationalized by the Perceived Stress Scale (Sheldon Cohen, 1983) and the Wellbeing Scale (National Center for Health Statistics, 1971). The participants are self-selected from a TRIO SSS program participants and faculty roster at an Idaho college. These students are identified as high risk for not persisting nor graduating from college, and stress is shown by research to be the number one barrier to completing a college degree (Oman, Shapiro, Thoresen, Plane & Flinders, 2008).

**Research Question(s)**

**RQ1:** What is the relationship between Mindfulness Based Stress Reduction workbook training and perceived stress in TRIO Student Support Services participants and staff at a college in Idaho?

**RQ2:** What is the relationship between Mindfulness Based Stress Reduction workbook training and general well-being in TRIO Student Support Services participants and staff at a college in Idaho?

H1: There is an inverse relationship between Mindfulness Based Stress Reduction workbook training and stress.
H2: There is a positive relationship between Mindfulness Based Stress Reduction workbook training and general well-being.

**Null Hypotheses**

The following null hypotheses are proposed:

**Ho1:** There is no relationship between MBSR training and perceived stress for college TRIO Student Support Services participants and staff at a College in Idaho.

**Ho2:** There is no relationship between MBSR training and well-being for college TRIO Student Support Services participants and staff at a college in Idaho.

**Participants and setting**

The participants for this study have been selected from a convenience sample of students at a rural Idaho, two-year College, within a current TRIO SSS program. Trio Student Support Services program represents approximately 3.16% of the total students enrolled in credit classes at a North Idaho College. The TRIO SSS program is comprised of predominately Caucasian with a small minority group. Of the 190 TRIO SSS participants who volunteered for the study are taking an average of 12.2 credits in the spring 2018 semester, participants who work is 67%. 33% are the primary income earners for their families. 50% have children living the home, the average number of children living in the home is 3. Participants who reported having reliable childcare was 100%. Stable housing was reported as 100%. Of the total participants 100% reported having reliable transportation. The total number of participants in the sample were $N = 8$ TRIO participants and staff.

**Instrumentation**
This study utilized the Perceived Stress Survey (Sheldon Cohen, 1983) and the Well-being Survey (National Center for Health Statistics, 1971) given as pre and posttests to identify the possible relationship of MBSR to perceived stress and overall well-being. The Perceived Stress Survey (PSS) is one of the most widely used psychological instruments for measuring individual’s perception of stress (Roberti, Harrington, Storch, 2016). The survey was designed to measure individual’s perceptions of their life’s events as stressful within the past 30 days. Cohen et al., 1988 go onto describe the scoring as, “PSS scores are obtained by reversing responses (e.g., 0 = 4, 1 = 3, 2 = 2, 3 = 1 & 4 = 0) to the four positively stated items (items 4, 5, 7, & 8) and then summing across all scale items,” Since the PSS was introduced by Cohen, Kamarch & Mermelsteing (1983) the article is cited over 14,070 times when searching the google scholar data base and when researched within EBSCO host data base, over 89,000 articles are listed as citing this single article since 1983. There have been 1,590 articles citing Cohen, Kamarch & Mermelsteing, 1983, this year alone. The PSS has been translated or adapted into more than 20 languages and reviewed as a reliable and valid measure for multitudes of cultures and sub-populations worldwide (Ezzati, Jiang, Katz, Sliwinski, Zimmerman & Lipton, 2014, Nordin & Nordin, 2013, Roberti, Harrington, & Storch, 2016).

General Well-being Scale has been in use even longer than the PSS and was introduced by the National Center for Health Statistics in 1971 and later credited to H.J. Dupuy in 1977. This self-reporting survey measures how a person feels about their psychological well-being and distress over the previous thirty (30) days. Scoring is done on a scale of 0 to 110, the numbers are divided into three sections describing severity of distress: 1-60 “severe distress” 61-70 “moderate distress” and 73-110 “positive well-being.” The validity and reliability is described by McDowell (2006) as:
“Validity (Quantitative): The average correlation of the GWB Schedule and six independent depression scales was 0.69. Correlations between individual subscales and criterion ratings were high, ranging between 0.65 and 0.90 (McDowell, 2006). Reliability (Quantitative): The test-retest reliability coefficients (after three months) of 0.68 and 0.85 for two different groups. Internal consistency coefficients for the three subscales range from 0.72 to 0.88. Three studies reported internal consistency coefficients over 0.9”

This test has been translated into more than forty-five (45) languages and tested for reliability and validity over the past forty-six (46) years with consistent results indicating adequate and accurate validity and reliability with wide ranging cultural and ethnic applicability (Leonardson, 2003, Lundgren-Nilsson, Jonsdottir, Ahlborg and Tennant, 2013).

Data Collection

Upon approval by the Institutional Review Board of Lewis-Clark State College, data collection began February 5, 2018. Participants completed anonymous surveys at the first Mindfulness Based Stress Reduction workbook training session. These surveys were placed into a sealed envelope upon completion and stored in a locked file cabinet. Participants received training on two chapters per week beginning with chapter two of the workbook. Participants were instructed to practice Mindfulness for 20 minutes each day, at home six days a week. Participants were instructed practice Mindfulness with or without a guided mediation recordings. Links to guided mediation recordings provided with the workbook, were provided via email links to the participants following each MBSR training session. Upon completion of the fourth week of MBSR home practice, participants completed the anonymous posttest survey. The posttest surveys were collected, placed into a sealed envelope and placed with the pretest data in a locked
file cabinet. Raw data collected was kept in a locked file cabinet and destroyed in May 2018.

Microsoft Excel will be the software utilized for the data analysis and will be stored on a password protected laptop, raw data will be destroyed in May 2018.

**Data Analysis**

The null hypothesis contains an independent variable (Mindfulness Based Stress Reduction workbook training) and a dependent variable (Stress and Wellbeing of students and faculty as operationalized by the PSS and WBS). The surveys were used as pretest and posttest study to evaluate the relationship of training. Therefore the data was analyzed using a $t$-test.

**Assumptions and Limitations**

Assumptions and limitations for this study are as follows:

**Assumptions**

This study is based on the following assumptions:

1. There is an assumption that students will honestly report on the pretest and posttests surveys for the data to be accurate and meaningful.

2. There is an assumption that voluntary people are bias toward change.

**Limitations**

This study will be conducted according to the following limitations:

1. The study sample is small, therefore the findings cannot be generalized to other populations.

2. This study is being conducted as a modified version of the eight week MBSR intervention created by Jon Kabat-Zinn in 1982, which includes a full day workshop on the sixth week that this study will not include. This modification is due to time constraints for the study.
3. Researcher may work with study participants weekly, teaching study skills.

**Methods Summary**

Researchers widely indicate the need to provide stress management to college students, specifically at risk populations such as the TRIO Student Support Services populations (Bergen-Cico, et al., 2013; Castillo et al., 2008; Conley et al., 2013; Guo et al., 2011; Osam & Cumberland, 2017; Palmer et al., 2014). This quantitative, pre-experimental, study is designed to answer the question “is there a relationship between stress and wellbeing and participating in a Mindfulness Stress Reduction workbook training?” The research was conducted at an Idaho college with self-selecting participants from the TRIO SSS program at the Idaho College upon Lewis-Clark State College Institutional Review Board’s approval. The pretest posttest design using two standard surveys along with demographics can provide the TRIO SSS program administrators, and researchers interested an opportunity to examine the role of MBSR has in mediating stress and well-being in TRIO SSS participants. Though this study has limitations due to low sample size, self-selection of participants and the utilization of a modified version of the MBSR technique, it is anticipated that, the information gathered from this study will be utilized by TRIO SSS and researchers to identify ways to reduce stress in college students and promote persistence and higher graduation rates.

**Analysis & Findings**

Email invitations to participate in this study were sent to approximately one hundred sixty TRIO Student Support Services participants and staff at an Idaho college. Eight people self-selected to join the study. Two people did not complete the study. Six people anonymously completed the study. Table 1 summarizes the demographics of this sample. Fifty percent of the
sample were freshman, sixty-seven percent were female and all of the participants had previous exposure to yoga or meditation practice.

**Table 1. Demographics and Relationship of Sample (N = 6)**

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<th>Rounded Percentile</th>
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</thead>
<tbody>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-24</td>
<td>2</td>
<td>33%</td>
<td></td>
</tr>
<tr>
<td>36-40</td>
<td>1</td>
<td>17%</td>
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</tr>
<tr>
<td>41-45</td>
<td>2</td>
<td>33%</td>
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</tr>
<tr>
<td>46-50</td>
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<td>17%</td>
<td></td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Female</td>
<td>4</td>
<td>67%</td>
<td></td>
</tr>
<tr>
<td>Male</td>
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<tr>
<td><strong>Year in College</strong></td>
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</tr>
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<td></td>
</tr>
<tr>
<td>Sophomore</td>
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<td>33%</td>
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<tr>
<td>Graduate</td>
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<tr>
<td><strong>Current Semester Credits</strong></td>
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<tr>
<td>Working</td>
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<td>67%</td>
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</tr>
<tr>
<td>Primary Income Earner</td>
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<td></td>
</tr>
<tr>
<td>Stable Housing</td>
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<td>100%</td>
<td></td>
</tr>
<tr>
<td>Children in the home</td>
<td>3</td>
<td>50%</td>
<td></td>
</tr>
<tr>
<td>No. of Children in the home</td>
<td></td>
<td>3</td>
<td>100%</td>
</tr>
<tr>
<td>Reliable Transportation</td>
<td>6</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>Previous Yoga or Meditation</td>
<td></td>
<td>6</td>
<td>100%</td>
</tr>
<tr>
<td>Regular Practice of Yoga or Meditation</td>
<td></td>
<td>1</td>
<td>17%</td>
</tr>
</tbody>
</table>

This pre-experimental quantitative study consisted of pre-test surveys followed by instruction on MBSR for one hour, once a week, for four weeks. The Perceived Stress Survey (Sheldon Cohen, 1983) and the General Well-Being Survey (National Center for Health Statistics, 1971) administered were chosen for their validity and reliability.

All data was gathered and analyzed utilizing Microsoft Excel. Data analysis for this study was conducted using a two-tailed paired T-test that found no significant change in the means of
the pre-test (M=20.17, sd = 8.38) and post-test (M=15, sd=7.56) conditions; t(5)=2.78, p=0.08 for perceived stress. The results for the general well-being scale yielded similar results after utilizing the two-tailed paired T-test that found no significant change in the means of the pre-test (M=64 , sd=22.27) and post-test (M=77.5, sd=19.89 ) conditions; t(5 )=2.78, p=0.20, for this study.

In this study we first hypothesized that there is an inverse relationship between Mindfulness Based Stress Reduction workbook training and stress. Our second hypothesis stated that there is a positive relationship between Mindfulness Based Stress Reduction workbook training and general well-being. As a result of this studies outcomes, we must accept the Null Hypothesis in both cases, that there is no relationship between MBSR training and perceived stress and general well-being for college TRIO Student Support Services participants and staff at a College in Idaho.

**Figure 1. Perceived Stress Scale Pre and Post Test Scores**

The findings of this study show there is no significant relationship and we must accept the null hypothesis, however as shown in Figure 1, we begin to see marked change on PSS by the end of the fourth week by two-thirds for the participants. Similarly in Figure 2 below, we begin to see changes in the GWS by the end of the fourth week in half of the participants. These findings are worth some discussion in light of the limitations of this study.

Figure 2. General Well-Being Scale Pre and Post Test Scores

![General Well-Being Scale](image)

*Note.* General Well-Being Scale (National Center for Health Statistics; Dupuy, H., 1971) Scoring; 1-60 severe distress, 61-70 moderate distress, 73-110 positive well-being.

**Discussion**

The purpose of this Quantitative pre-experimental study was to examine the effects of a four week Mindfulness Based Stress Reduction workbook training on perceived stress and overall well-being with TRIO SSS participants and staff. Having accepted the Null Hypotheses in this study, that there was no significant relationship, we look to the limitations of this study. Viewing this study through the transactional stress model theory that purports that we can influence and intervene on the stress (Frey & Davidson, 2015; Lazarus & Folkman, 1987; Yancura 2016), this study was left with a conclusion similar to Diaz, et al. (2014), and others. This study lacked the sample size and length of time necessary to accurately support the proposed hypothesis and confirm previous findings. Previous studies (Bergen-Cico, et al., 2013;
Conley et al., (2013; Oman et al., 2008; Stephanie & Wells, 2013) clearly outline the mediating effect MBSR has on stress and the absolute necessity for psychoeducation with regard to stress and stress management in college students. Considering the gap in services provided to TRIO SSS participants, future research should look at implementing MBSR in its full delivery design with this population. Dwyer et al., (2012) and Everett, (2015) make clear that helping student’s achieve their educational goals is economically beneficial for both the individual and for society.

**Conclusion**

TRIO Student Support Services served over 205 thousand high risk students in the 2013-2014 school year. United States tax payers invested over 748 million dollar in these high risk students, whose graduation rate is reported by Woosley & Shelpler (2011) was at 47% for completing a four year degree. When compared to the graduation rates of 78% for students with one parent who had achieved a four year college degree, this study is of paramount importance. Attaining a College education provides opportunities for at risk populations to lift themselves out of poverty, increase their social mobility and provide economic competitiveness to our nation’s work force. TRIO SSS shows great success in increasing this populations persistence and graduation rates. Including an element of stress management with scientifically significant evidence could fill this supportive gap and boost graduation rates and provide the advantage in learning these students need to be successful college graduates.

**Limitations**

Limitations with this study begin with a small sample size that cannot be generalized to other populations. Several participants missed a single session reducing education, exposure, and practice. Most notably this study was a modified version of the evidence based MBSR intervention conducted over a four week period of time, as opposed to the standard eight week treatment.
intervention with one full eight hour day workshop. The sessions in this study were limited to one hour, whereas the standard MBSR sessions are two hours in length and include a forty-five minute meditation practice each week during each session. This study included only brief fifteen and twenty-five minute practice sessions each week, during the one hour session. The limitations likely affected the outcome of this study by reducing the amount of time allowed for formal practice in a group setting and for the implementation to effect change. The inability to implement full forty-five minute mindfulness practice sessions as well as the lack of a practice logs were likely to have significant impact on the study as well. Another limitation was that the researcher may have been working with study participants on education study skills during this study period.

**Future Research**

Future research can build on this study. Although this study did not prove overall significant mediating effect, within the four weeks of the study individual scores showed some change from the beginning of the study to the end. Future longevity studies need to be conducted with larger sample sizes. The challenges to this study continue to support the need for full length MBSR, as designed by Kabat Zinn (1982). Full implementation is required to mediate change. Through the utilization of the full MBSR evidenced based practice method, increasing formal practice times included in each session may have significant impacts on reported outcomes. I believe utilization of the Perceived Stress Scale and the General Well-Being scale are sufficient measurement tools for this research, however tracking student grades and changes in GPA’s for this population could be included as well. Ideas for future research could include adding a one credit lab option to existing stress management courses offered at this or any community college setting. These opportunities for further research could impact student outcomes, persistence and
college completing rates for not only at risk populations, but all college students seeking to achieve their educational goals. This research has far reaching implications for the individual, families, and larger society as we increase workforce knowledge, increase tax revenue through future employment and decrease future safety net utilization with an educated and competent work force.
References


