

The Pennsylvania State University

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**EXAMINING FACTORS AFFECTING YOUTH VALUE OF MINDFUL LIVING
AND A MINDFULNESS PROGRAM EVALUATION AMONG PARTICIPANTS
AT PENNSYLVANIA AND OHIO 4-H CAMPS**

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by

Mariah Stollar

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The thesis of Mariah Stollar was reviewed and approved* by the following:

Suzanna Windon

Assistant Professor of Agricultural and Extension Education

Thesis Adviser

Mark Brennan

Professor of Agricultural and Extension Education

Robert Roeser

Professor of Caring and Compassion and Professor of Human

Development and Family Studies

Joshua Rice

Assistant Director, 4-H Youth Development Programs

Special Signatory

Mark Brennan

Program Chair, Agricultural and Extension Education

ABSTRACT

This study addressed the gap in the stress management education literature related to introductory mindfulness programs for youth in non-formal educational settings, including Extension education and 4-H. The two-hour program *The Mindfulness Moments: Today and 4-Life* for youth (ages 10-18) was adapted, delivered, and evaluated. The goal of the program was to help youth understand mindfulness and mindful living principles by providing them with mindfulness practices and strategies. A new evaluation instrument helped to ensure that youth participants learned and intended to apply mindfulness concepts from the program.

The purpose of the research part of this thesis was to assess youth experience of a mindfulness program and explore factors that affect youth value of mindful living. The study found that, on average, youth highly value mindful living, and there was a significant relationship between youth value of mindful living and each state factor of mindfulness, namely, (a) awareness of mental events, (b) awareness of physical sensations, and (c) non-judgement of emotional experience. Furthermore, there was a significant relationship between youth value of mindful living and gender. However, there were not significant relationships found between youth value of mindful living and religiosity and prior experience with mindfulness. Study results suggested that mindfulness program practitioners should first focus on helping youth learn the benefits of mindfulness and fostering enthusiasm about mindfulness before suggesting youth implement the practices on their own. Other implications of these findings for future research and practice for mindfulness programming with youth are discussed.

TABLE OF CONTENTS

| | |
|--|------|
| LIST OF FIGURES | viii |
| LIST OF TABLES..... | ix |
| ACKNOWLEDGEMENTS..... | xi |
| Chapter 1 Introduction..... | 1 |
| Background..... | 1 |
| Problem Statement..... | 2 |
| Purpose..... | 6 |
| Evaluation and Research Questions..... | 7 |
| Overview of Methodology..... | 7 |
| Study Significance..... | 8 |
| Assumptions..... | 9 |
| Eliminations | 10 |
| Operational Definitions..... | 11 |
| Conclusion | 14 |
| Chapter 2 Review of Literature | 15 |
| Positive Youth Development..... | 15 |
| Youth Leadership Development | 19 |
| Mindfulness Foundations..... | 21 |
| Mindfulness for Adults in Secular Settings | 22 |
| Mindfulness Programs for Youth | 24 |
| Youth Mindfulness Programs in Educational Settings | 24 |
| Mindfulness in Community Settings..... | 25 |
| Stress Management Education through Mindfulness Practice..... | 28 |
| Youth Development through Intrapersonal Leadership Development and Stress Management..... | 28 |
| Overview of the Cooperative Extension System and the 4-H Program | 30 |
| Youth Development within Extension and 4-H Camp Settings | 32 |
| Leadership Development for Youth through the 4-H Extension Program | 33 |
| Mindfulness Programs in 4-H Settings | 35 |
| Factors Contributing to Youth Value of Mindful Living | 36 |
| Instrument Constructs | 41 |
| Awareness of Mental Events..... | 41 |
| Awareness of Physical Sensations | 43 |
| Non-Judgment of Emotional Experience | 45 |
| Youth Value of Mindful Living | 47 |
| Conceptual Framework..... | 47 |
| Program Logic Model..... | 49 |

| | |
|--|----|
| Conclusion | 50 |
| Chapter 3 Methodology | 51 |
| Introduction | 51 |
| Part I: The Program Description and Program Evaluation | 52 |
| Overview of the Mindfulness Moments: Today and 4-Life Program..... | 52 |
| Program Description | 53 |
| Components of Curriculum..... | 54 |
| Program Objectives..... | 55 |
| Program Assumptions and Limitation | 55 |
| Purpose of the Program Evaluation and Evaluation Questions | 55 |
| Perceived Knowledge of Mindfulness | 56 |
| Intention to Apply Mindfulness Practices in Daily Life | 57 |
| Desire to Learn More about Mindfulness | 57 |
| Part II: The Research Study | 58 |
| Type of Research..... | 58 |
| Purpose and Research Questions | 58 |
| Research Design..... | 59 |
| Population | 59 |
| Instrumentation | 59 |
| Awareness of Mental Events (from SMS) | 61 |
| Awareness of Physical Sensations (from SMS)..... | 62 |
| Non-Judgment of Emotional Experience (from FFMQ)..... | 62 |
| Youth Value of Mindful Living (developed by the researcher)..... | 63 |
| Demographics | 64 |
| Variables | 64 |
| Dependent Variable..... | 64 |
| Independent Variable | 64 |
| Site Selection and Recruitment | 66 |
| Data Collection Procedures..... | 66 |
| Limitations of the Research Design | 68 |
| Conclusion | 69 |
| Chapter 4 Results..... | 70 |
| Data Analysis | 70 |
| Descriptive Statistics for Key Variables..... | 72 |
| Demographic Characteristics of Study Participants | 72 |
| Awareness of Mental Events | 74 |
| Awareness of Physical Sensations | 74 |
| Non-Judgment of Emotional Experience | 74 |
| Youth Value of Mindful Living | 75 |
| Findings for Question 1 | 75 |
| Findings for Question 2 | 79 |
| Findings for Question 3 | 81 |
| Findings for Question 4 | 81 |
| Findings for Question 5 | 82 |

| | |
|--|-----|
| Summary | 85 |
| Chapter 5 Discussion | 87 |
| Study Overview | 87 |
| Site Selection | 88 |
| Program Participants | 88 |
| Conclusions, Discussion and Recommendations | 88 |
| Evaluation Question 1: Does participation in the mindfulness program increase perceived knowledge of mindfulness? | 89 |
| Conclusions | 89 |
| Discussion and Recommendations | 89 |
| Evaluation Question 2: Do program participants intend to apply mindfulness practices in daily life? | 91 |
| Conclusions | 91 |
| Discussion and Recommendations | 91 |
| Evaluation Question 3: How does desire to continue mindfulness practice relate to intention to practice mindfulness? | 92 |
| Conclusions | 92 |
| Discussion and Recommendations | 93 |
| More Program Development, Implementation, and Evaluation Implications and Recommendations for Extension | 93 |
| Research Question 4: What is the relationship between youth value of mindful living and non-judgement of emotional experience, awareness of physical sensations, and awareness of mental events? | 94 |
| Conclusions | 94 |
| Discussion and Recommendations | 94 |
| Research Question 5: What are youth perceptions of youth value of mindful living differed based on gender, religiosity, and prior experience? | 95 |
| Conclusions | 95 |
| Gender Discussion and Recommendations | 95 |
| Religiosity Discussion and Recommendations | 96 |
| Prior Experience with Mindfulness Discussion and Recommendations | 97 |
| Conclusion and Implications | 98 |
| References | 101 |
| Appendix A Program Logic Model | 123 |
| Appendix B IRB Approval Letter | 124 |
| Appendix C Study Instrument | 125 |
| Appendix D Camp Recruitment Letter | 132 |
| Appendix E Recruitment Message and Study Consent Form | 134 |

| | |
|---|-----|
| Appendix F Study Assent Form | 139 |
| Appendix G Additional Implication Letter to Pennsylvania 4-H..... | 140 |

LIST OF FIGURES

| | |
|---|-------|
| Figure 2-1: 5 C's of Youth Development..... | 17 |
| Figure 2-2: Positive Youth Development Aligned With Six Cs Of Community Youth Development..... | 18-19 |
| Figure 2-3: Tanay & Bernstein's two-level model of state mindfulness. | 39 |
| Figure 2-4: Conceptual Framework..... | 48 |
| Figure 4-1: Pre-test score overall histogram..... | 77 |
| Figure 4-2: Pre-test score overall normal Q-Q plot..... | 78 |
| Figure 4-3: Post-test score overall normal Q-Q plot | 78 |
| Figure 4-4: Post-test overall score histogram | 79 |
| Figure 4-5: Intention to apply mindfulness practice overall score histogram | 80 |
| Figure 4-6: Intention to apply mindfulness practice overall score normal Q-Q plot..... | 80 |

LIST OF TABLES

| | |
|--|-------|
| Table 3-1: Components of The Mindfulness Moments: Today and 4-Life Curriculum | 54 |
| Table 3-2: Summary of the evaluation instrument | 56 |
| Table 3-3: Examples of change in perceived knowledge items | 57 |
| Table 3-4: Examples of intention to apply items..... | 57 |
| Table 3-5: Examples of desire items | 58 |
| Table 3-6: Summary of instruments used in the research study..... | 61 |
| Table 3-7: State Mindfulness of the Mind and Awareness of Mental Events Item Comparisons Examples..... | 62 |
| Table 3-8: State Mindfulness of the Body and Awareness of Physical Sensations Scales Comparison..... | 62 |
| Table 3-9: Non-Judgment and Non-Judgment of Emotional Experience Scales Item Comparisons Examples..... | 63 |
| Table 3-10: Youth Value of Mindful Living scale item examples..... | 63 |
| Table 4-1: Describing the magnitude of correlations with Davis' (1971) conventions | 71 |
| Table 4-2: Summary of demographic variables..... | 73-74 |
| Table 4-3: Means and standard deviations for pre and post-test perceived knowledge of mindfulness items | 76 |
| Table 4-4: Paired samples t-test results for perceived knowledge of mindfulness..... | 77 |
| Table 4-5: Descriptive statistics for participants' intention to apply mindfulness practices... | 80 |
| Table 4-6: Bivariate correlation among desire to continue mindfulness practice and intention to practice mindfulness..... | 81 |
| Table 4-7: Bivariate correlation among youth value of mindful living and factors of state mindfulness..... | 82 |
| Table 4-8: Descriptive statistics for youth value of mindful living by religiosity..... | 83 |
| Table 4-9: Descriptive statistics for youth value of mindful living by prior experience with mindfulness..... | 83 |
| Table 4-10: Descriptive statistics for youth value of mindful living by gender..... | 83 |

| | |
|--|----|
| Table 4-11: Independent Samples t-Test – Mean scores of youth value of mindful living on religiosity, mindful living, prior experience with mindfulness, and gender | 83 |
| Table 4-12: Chi-square analysis on association between youth value of mindful living and selected demographic variables: religion, gender, and experience | 85 |

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Chapter 1

Introduction

The purpose of this study was to assess youth experience of a mindfulness program taught at Pennsylvania and Ohio 4-H camps and investigate factors affecting youth value of mindful living, among youth ages 10-18.

In this chapter, background on the present study will be discussed. The problem statement will be presented. The purpose and research questions will be presented. An overview of the methods will be provided. The significance of the present study will also be discussed. Assumptions and limitations will be discussed. The chapter will conclude with the operational definitions for the study.

Background

Mindfulness programs provide a variety of benefits for both adult and youth participants, including self-regulation (Brown & Ryan, 2004), improved ability to pay attention (Kabat-Zin, 2012), stress reduction (Chiesa and Serretti, 2009), and reduced mental health disorder symptoms (Creswell, 2017; Grossman, Niemann, Schmidt & Walach, 2004). Previous youth mindfulness research has examined mindfulness program benefits within school settings and clinical settings specifically (Thompson & Gauntlett-Gilbert, 2008; Zenner, Herrnleben-Kurz & Walach, 2014). The topic of mindfulness has been gaining attention in recent years due to an increase in prevalence of mental health issues (Marchand, 2014). However, little research has been conducted to explore mindfulness programs in the context of a leadership program for youth, and only one Extension education study examined a youth mindfulness program (Le, 2014).

The next section will present mental health issues that have been arising in the U.S., Pennsylvania, and Ohio. Interventions and successes to date will be presented, and a gap in the literature on mindfulness programs in a non-formal, 4-H Extension education context will be presented.

Problem Statement

The topic of mindfulness has gained attention in recent years due to an increased prevalence of mental health issues (Marchand, 2014). This increase can be observed around the world, in the United States, and in Pennsylvania and Ohio. Pennsylvania is ranked number 14 and Ohio is ranked number 19 overall when compared to other states in terms of prevalence of mental health issues in the nation (Mental Health America, 2018). In terms of the prevalence of these issues within the youth population specifically, the rankings are more concerning, as Pennsylvania ranks number 6 and Ohio ranks number 13 when compared to other states (Mental Health America, 2018). As of 2018, in the United States, 18% of adults reported having a mental health condition, and 11.93% of youth reported suffering from at least one major depressive episode each year (Mental Health America, 2018). In addition, one national study found 49.5% of adolescent participants were diagnosed with some type of mental disorder, with about 22.2% of this population suffering from at least one severe impairment (Merikangas et. al., 2010). Scholars concluded that 1 in 4-5 youth will experience a mental disorder in their lifetime. After conducting a 28-country study, the World Health Organization (WHO) found that mental health issues are common throughout the world (Kessler et. al., 2009). The Organization urged expansion of mental health treatment due to the potential benefits for employers and societies at large. In addition, scholars urge that addressing mental health issues in children's early developmental stages should be a priority for global health's research agenda (Kieling, 2011).

Due to the prevalence of this issue, educators across the nation agree that 21st century American youth need mental health prevention programs (Greenberg, et. al., 2003). Leadership programming may be a way to help prevent mental health problems with youth, as leadership programming involves soft skill development. More specifically, emotional intelligence training, through a mindfulness program, may be an effective approach to provide youth with resources to handle stress.

George (2000) identified emotional intelligence as a necessary skill for today's leaders. Salovey and Mayer (1990) coined the term emotional intelligence, and defined it as "the ability to monitor one's own and others' feelings and emotions, to discriminate among them and to use this information to guide one's thinking and actions" (p. 189). Brown and Ryan (2003, as cited by Ostafin, Robinson, & Meier, 2015) defined mindfulness as a heightened level of awareness of the present reality, and noted a connection between mindfulness and emotional intelligence. The authors explained that mindfulness can help individuals develop self-regulation skills. In general, mindfulness programs teach people to be more aware of their inner and outer experiences, or to pay attention on purpose (Kabat-Zin, 2012). Mindfulness programs for managing stress--called mindfulness-based stress reduction, or MBSR—can aid people in reducing stress levels (Chiesa and Serretti, 2009).

The literature suggests there may be other benefits for practicing mindfulness beyond stress management. Studies suggest that people who participate in mindfulness programs can better manage their health and save the employers and the health care system money (Ruff & Mackenzie, 2009). For example, many mindfulness studies have shown improvement in psychological aspects for participants across multiple variables, including increased quality of life, decreased depression and anxiety, improved coping styles, and cured addiction (Creswell,

2017; Grossman, Niemann, Schmidt & Walach, 2004). Kuyken and colleagues (2013) found that mindfulness can prevent depression relapse and decrease stress levels among youth populations. Mindfulness can serve as an effective tool to increase hope and decrease anxiety (Sears & Kraus, 2009).

Further studies of MBSR programming in youth are needed to confirm that these programs can reduce stress (Sibinga, et. al. 2011). Research related to mindfulness programs for adults has been conducted for decades, but youth studies are just now appearing the recent literature (Sibinga, et. al., 2011). Previous research has identified benefits of mindfulness programs for youth in school settings and clinical settings (Thompson & Gauntlett-Gilbert, 2008; Zenner, Herrnleben-Kurz & Walach, 2014). However, little research has explored mindfulness programs in the context of experiential educational settings. For example, Zenner, Herrnleben-Kurz, and Walach (2014) reviewed several studies that examined mindfulness programs in schools. The authors found that the mindfulness programs provided youth with many benefits, namely: emotional self-regulation, increased empathy and compassion, better self-representations, ethical sensitivity, increased creativity, and improved problem-solving skills. Hampel, Meier, and Kummel (2008) also found that stress-management programming is effective for youth in school settings. Berger and Stein (2009) found that mindfulness programs can be effective in afterschool programs.

Research to date on one mindfulness program shows notable impacts for youth populations. Broderick and Frank (2014) suggest that adolescence is an optimal age to teach mindfulness, as youth are developing the ability to self-regulate and gaining a sense of independence in this developmental stage. Developers and practitioners of the Learning to BREATHE Program, a mindfulness program for adolescents, found that mindfulness

programming may also serve as a way to introduce participants to other forms of social emotional learning (Broderick & Frank, 2014). The program also emphasizes self-compassion, a component of mindfulness that research suggests may help teens with self-esteem issues (Neff & McGehee, 2010).

Despite these developments in the literature, Cooperative Extension and 4-H have not evaluated and researched youth mindfulness programs for youth to increase emotional intelligence and reduce stress. Cooperative Extension has worked with communities for over 100 years to bring them research-based information through non-formal education and hands-on learning activities (USDA, 2019). Extension provides research-based education in the following major program areas: Agricultural and Food Biosecurity, Agricultural Systems, Animal and Animal Products, Biotechnology and Genomics, Economics and Commerce, Families, Youth and Communities, Food, Nutrition and Health, Food and Nutrition Research Program, Natural Resources and Environment, Pest Management, Plants and Plant Products, Technology and Engineering (USDA, 2019). The 4-H Youth Development program exists under the area of Families, Youth and Communities. The 4-H program is a national youth development program that helps youth to develop life and leadership skills (National 4-H Council, 2019). 4-H's approach of providing youth with skills to succeed before they reach adulthood aligns with Extension's current orientation toward programming. Extension provided reactive programming to society's problems in the past, but more recently, scholars call for a shift to a more proactive or futuring approach, working to address emerging trends and issues before they become major societal problems (Sobrero, 2004).

Therefore, the 4-H program may be well positioned to provide young people leadership skills to manage stress through a mindfulness program. However, there is a lack of research on

mindfulness programs in a 4-H program context. Many mindfulness studies have demonstrated the benefits that mindfulness programming can provide to adults in a variety of contexts, and the number of these studies has significantly increased over the past 20 years (Cavanagh, Strauss, Cicconi, Griffiths, Wyper, & Jones, 2013; Creswell, 2017; Davis & Hayes, 2011; Morgan, Simpson, & Smith, 2015; Paller, et. al., 2015; Rasmussen & Pidgeon, 2011). More recent studies are beginning to explore the effects of mindfulness programs in new populations, such as youth. Scholars have found that mindfulness programs in school settings and clinical program settings can achieve positive results and academic benefits for youth (Bluth, Roberson & Gaylord, 2015; Brown, West, Loverich, Biegel, 2001; Schonert-Reichl & Lawlor, 2010; Zenner, Hernleben-Kurz & Walach, 2014). However, few studies have explored mindfulness programs in experiential educational settings, such as youth residential camps (Gillard, Roark, Nyagam & Bialeschki, 2011; Lier & Diaz, 2010).

In conclusion, the literature suggests that a mindfulness leadership program may be an effective way to help address youth stress-management challenges. There was only one Extension study that tested and evaluated a mindfulness program for 4-H youth. There is no existing curriculum for teaching mindfulness in a 4-H camp setting. In addition, few studies have examined the effects of mindfulness programming for youth outside of school and afterschool settings. Therefore, a research-based program on mindfulness should be created, tested, evaluated and studied in a 4-H non-formal educational setting.

Purpose

The aim of this study was to assess youth experience of a mindfulness program taught at Pennsylvania and Ohio 4-H camps. This study evaluated the mindfulness program that was

adapted and delivered by the researcher in Pennsylvania and Ohio. Moreover, this study explored factors that affect youth value of mindful living, among youth ages 10-18.

Evaluation and Research Questions

The study was guided by three program evaluation questions and two research questions:

- E1: Does participation in the mindfulness program increase perceived knowledge of mindfulness?
- E2: Do program participants intend to apply mindfulness practices in daily life?
- E3: How does desire to continue mindfulness practice relate to intention to practice mindfulness?
- R4: What is the relationship between youth value of mindful living and the state factors of mindfulness non-judgement of emotional experience, awareness of physical sensations, and awareness of mental events?
- R5: What are youth perceptions of youth value of mindful living differed based on gender, religiosity, and prior experience with mindfulness?

Overview of Methodology

This study utilized a descriptive-correlational research design. The first purpose of the study was to conduct a program evaluation for the youth mindfulness program Mindfulness Moments: Today and 4-Life. The second purpose of the study was to explore the relationships between the dependent variable (youth value of mindful living) and independent variables (the state factors of mindfulness non-judgement of emotional experience, awareness of physical sensations, and awareness of mental events and selected demographics). To address the research questions, a simple one-group pre-test posttest design and posttest only design was utilized for this non-experimental study. Data were collected from participants at the Pennsylvania 4-H Junior Leadership Conference, Pennsylvania 4-H Camp Kanasatake, and Ohio 4-H Camp

Hervida using a paper and pencil questionnaire. Data were analyzed using descriptive and correlational statistics. Chapter 3 provides a more detailed description of this study's methodology.

Study Significance

Pennsylvania 4-H's goal is to provide youth with life skills, and their mission is to empower "youth to reach their full potential" (Penn State Extension, n.d.). Mental health, coping skills, and emotional regulation are an important part of a child's personal development, in the context of the Six C's of Community Youth Development (Perkins, 2009). Perkins (2009) noted that psychological and emotional development are related to Competence, Confidence, Character, and Caring/Compassion development in youth. This study could help demonstrate the ability of a mindfulness program to contribute to 4-H's youth development mission in Pennsylvania, as Pennsylvania 4-H professionals aim to increase a member's knowledge in a variety of project areas through organizational goals (Penn State Extension, n.d.). The 4-H program in Ohio has similar goals, boasting their commitment "to helping young people develop skills that will help them succeed" (Ohio 4-H Youth Development, 2019). The mindfulness program being studied aimed to increase 4-H youth's knowledge of mindfulness and emotional intelligence through the hands-on experience.

This study could have other broader implications. Few studies have assessed the effects of mindfulness programs for youth outside of school-based settings; one study introduced the concept of teaching mindfulness in an informal, outdoor educational setting (Frauman, 2011). Afterschool programs and youth organizations may also be beneficial places to teach mindfulness, as previous research identified limitations of a structured school day as a challenge that comes with incorporating mindfulness into formal educational settings (Broderick & Frank,

2014). These programs may be a more effective venue to learn a new skill in, as research has found youth “experience more intrinsic motivation, put forth more concerted effort, and feel less apathetic” when engaged in activities outside of school (Vandell, et al., 2005, p. 128). Due to its exploratory nature, this study could spark interest in this area among youth researchers. Few recent studies assessed levels of mindfulness in a youth camp setting (Gillard, Roark, Nyagam & Bialeschki, 2011; Lier & Diaz, 2010), and only one 4-H youth camp mindfulness program article was reported in the literature (Le, 2014). Most of these studies took place at day camps rather than residential camps. Existing studies have also advocated for gradually introducing mindfulness into a school setting overtime (Broderick & Frank, 2014). The researcher used this approach in the present study by first introducing the concept to the Pennsylvania and Ohio 4-H programs in a two-hour workshop session during a standalone 4-H event, rather than implementing a series of workshops.

Findings from this study aided the Pennsylvania 4-H program in the following ways:

- A Pennsylvania 4-H Youth Extension mindfulness program, curriculum, evaluation instrument, and research instrument for Pennsylvania 4-H educators was developed.
- This study provided data to support implementing more mindfulness programs in Pennsylvania 4-H and Ohio 4-H and beyond.
- Scholars and practitioners are now better positioned to begin exploring the feasibility of mindfulness programs outside of classroom and afterschool settings and within Extension education contexts, specifically in a 4-H camp setting.

Assumptions

The following assumptions guided this study:

1. The literature and consultation of 4-H youth development and leadership development experts will be sufficient to create an instrument to evaluate the new mindfulness program.
2. The instructor effectively conveys program objectives that help youth to understand and participate in the program.
3. Youth are able to report their program experiences and complete the research portion of the survey.
4. A mindfulness program has similar benefits for youth in a non-formal educational setting as in clinical and formal educational settings.

Limitations

This study recognized the following limitations:

1. Results were limited to the convenience sample of Pennsylvania and Ohio 4-H youth who attended 4-H sites participating in the study, so results are not be able to be generalized across all Pennsylvania 4-H and Ohio 4-H youth or all Pennsylvania and Ohio youth.
2. There have been few studies assessing teaching mindfulness in non-formal settings, and no instrument existed in the literature to measure mindfulness for youth after attending a mindfulness workshop in a non-formal educational setting. Therefore, this study was exploratory in nature and results cannot be completely conclusive. More research in this area and replication at other 4-H camps are needed after the study.
3. Results were self-reported by youth. The study had to assume children were developmentally ready to practice self-awareness and assessment.
4. The pilot was conducted in a 4-H conference setting rather than a camp setting due to feasibility of completing the pilot before camps began.

5. This study examined a two-hour workshop session, rather than a workshop taking place over several weeks. Previous mindfulness program studies reporting change in mindfulness for youth took place over multiple weeks. In the future, a longer-term program and study in an Extension context should be conducted.

6. There was not an equal distribution of age among 4-H participants in the study. Participants signed up for the session by choosing from a list of educational activities. Because sites and participants had to volunteer to participate in the study, it was not possible to achieve an equal age distribution.

Operational Definitions

This study used the following definitions:

Mindfulness

“Paying attention in a particular way: on purpose, in the present moment, and nonjudgmentally” (Kabat-Zin, 2012, p. 1). This definition contains three important components of mindfulness, including: observation, awareness, and non-judgment.

Mindfulness practices

Exercises that are regularly applied to help emulate mindfulness, which may include breathing exercises, body scans, imagery exercises, progressive muscle relaxation, physical activities, and mindful eating (Powers-Barker, Carter, & Worthington, 2018).

Emotional Intelligence

“The ability to monitor one's own and others' feelings and emotions, to discriminate among them and to use this information to guide one's thinking and actions” (p. 189, Salovey & Mayer, 1990).

State Mindfulness

An individual's "perceived level of attention to and awareness of their present experience during a specific period of time and context" (Ruimi, Hadash, Tanay & Bernstein, 2019). In this study, components of state mindfulness include awareness of mental events, awareness of physical sensations, and nonjudgment of emotional experience.

Youth Value Mindful Living

A state of being where youth "apply heightened awareness to their relationships, health behaviors, and activities of daily life, while considering the impact of these on society" (Niemec, 2012, p. 22) and see value in doing so.

Non-judgment of Emotional Experience

Accepting one's emotional experience, without labeling it as good or bad; or noticing thoughts, emotions and feelings and making peace with them, rather than allowing these thoughts to impact one's mood or self-worth. This definition was chosen after synthesizing the following constructs from previous mindfulness program studies: Non-Judgment, (Baer, Smith, Hopkins, Krietemeyer, & Toney, 2006), ability to not judge one's internal experiences (Greco, Baer, & Smith, 2011), non-acceptance of emotional response (Gratz & Roemer, 2004), and self-compassion (Neff, 2003).

Awareness of Physical Sensations

Observing what is felt in the body, or sensations such as temperature in a space, the sense of touch, or anything else a person can physically sense. This definition was chosen after synthesizing the following constructs from previous mindfulness program studies: attention to the present moment (Bluth, Roberson, & Gaylord, 2015), observe (Baer, Smith, and Allen, 2004), and state mindfulness of the body (Tanay & Bernstein, 2013).

Awareness of Mental Events

Being aware of what is occurring in the mind, or noticing thoughts, feelings, and emotions. This definition was chosen after synthesizing the following constructs from previous mindfulness program studies: metacognitive awareness, (Teasdale et. al., 2002), awareness (Cardaciotto, Herbert, Forman, Moitra & Farrow, 2008; Feldman, et. al., 2007), state mindfulness of the mind (Tanay & Bernstein, 2013), and observe (Baer, Smith, Hopkins, Krietemeyer & Toney, 2006).

4-H

4-H is the nation's largest youth development program, serving almost 6 million youth in the United States (National 4-H Council, 2019). Land grant institutions within each state oversee the program. In Pennsylvania, The Pennsylvania University's Extension service, Penn State Extension, oversees the Pennsylvania 4-H program. In Ohio, Ohio State University Extension oversees the Ohio 4-H program. Administrators working at the state level, 4-H Extension educators and staff working at the county level, and local 4-H volunteer leaders facilitate the program. This non-formal educational program promotes learning by doing for youth ages 5-19. Members take a variety of projects and learn life skills through hands-on activities such as involvement in projects, summer camp, public speaking contests, teen leadership opportunities, and board representative memberships.

4-H Youth

A 4-H youth is a member of the national 4-H youth development program. Program members are youth ages 5-18. Participants in this study will be Pennsylvania 4-H and Ohio 4-H youth who attend selected Penn State Extension and Ohio State University Extension 4-H Camps, but only youth ages 10-18 were involved in the study.

4-H Camp

4-H camp is a residential summer camp for 4-H youth. 4-H camp in this study will refer to 4-H camps within the state of Pennsylvania and Ohio, which are run by the Pennsylvania 4-H and Ohio 4-H county programs. 4-H camp involves youth from various counties engaging in various programs and activities at a residential camp to learn life skills and independence in a non-formal educational setting.

Youth Development

In the context of 4-H, positive youth development is providing 4-H participants with experiences that will “increase the likelihood of enhanced wellbeing and optimal development” (Arnold, 2018, p. 141). Specific to the context of the Pennsylvania 4-H program, the program aims to achieve positive youth development with the goal “to increase a member’s knowledge in a variety of project areas, while teaching life-skills such as decision-making, public speaking, and leadership” (Penn State Extension, n.d.).

Conclusion

In conclusion, Chapter 1 presented the background, problem statement, purpose statement, research questions, overview of methodology, study significance, assumptions, limitations, and operational definitions for the present study. Chapter 2 will present the review of literature.

Chapter 2

Review of Literature

The purpose of this study was to 1) evaluate the mindfulness program that was adapted and delivered by the researcher in Pennsylvania and Ohio and to 2) explore factors that affect youth value of mindful living, among youth ages 10-18. The literature review begins by exploring positive youth development and youth leadership development programs. The foundations of mindfulness and mindfulness as an approach to teach stress management are discussed in further detail. Settings for teaching mindfulness are discussed, and further discussed in a youth context. An overview of Extension and the 4-H program is presented, which clarifies the context for discussing youth leadership development within Extension and 4-H camp settings. Existing 4-H leadership development programs are discussed, and mindfulness programs that have been developed through the 4-H program are also discussed. Finally, the instrument constructs, Awareness of Mental Events, Awareness of Physical Sensations, Non-Judgement of Emotional Experience, and Youth Value of Mindful Living are discussed. The review of literature concludes with an overview of the program logic and the conceptual framework.

Positive Youth Development

Positive youth development is a concept that integrates both the research and practical implications for promoting healthy personal development for young people (Benson, Scales, Hamilton, & Sesma, 2007). This approach involves collective effort from multiple institutions, including a youth's family, the school, and the community (Benson, Scales, Hamilton & Sesma, 2007). Various models of positive youth development approaches exist in the literature. One of the most widely cited youth development models is Lerner and Lerner's (2006) 5 C's of Positive

Youth Development. This model involves fostering Competence, Confidence, Character, Caring, and Connection development among young people.

The 4-H program has utilized youth development models to guide programming to foster positive youth development among youth and to guide studies of positive youth development. Arnold and Silliman (2017) argue that the Five C's Model is the most utilized and applied positive youth development model for youth. Research from the National 4-H program, conducted by Tufts university (Lerner & Lerner, 2013) used the 5 C's model to guide their study of positive youth development. A sixth C, "Caring" or "Caring/Compassion", is also sometimes included in this model. The model is presented in Figure 2-1. The model demonstrates how the 5 C's inform (Confidence, Connection, Competence, Contribution, and Character) positive youth development. 4-H positive youth development programming inputs include skill-building, meaningful leadership, and long-term adult care. All of these factors work together inform 4-H youth outcomes, or the 5 Cs's. These outcomes drive youth to positively contribute to their families and communities and reduce youth risk behaviors. Youth who have reduced risk behaviors are more likely to contribute to their communities, and youth who contribute to their communities are less likely to engage in risk behaviors. The authors found that 4-H'ers excel in a variety of ways when compared to their peers not involved in 4-H, including: being more likely to contribute to their families, to be civically engaged, and to be involved in STEM.



Figure 2-1: 5 C's of Youth Development.

Note: Source: <https://4-h.org/wp-content/uploads/2016/02/4-H-Study-of-Positive-Youth-Development-Full-Report.pdf>

An extension of this model is the Six C's of Community Youth Development (Perkins, 2009). The Six C's of Community Youth Development model is based upon the Five C's Model of Positive Youth Development (Lerner & Lerner, 2013). Perkins' (2009) Six C's Model guided the development of the mindfulness program for the present study. Perkin's (2009) model was chosen because the program is a 4-H program that incorporates development of a leadership skill (stress management through mindfulness practice) in a community setting. Perkins (2009) expanded upon Lerner and Lerner's (2013) model and grouped the C's into asset-based categories. These categories include physical development (Competence), psychological and emotional development (Competence, Confidence, Character, Caring/Compassion), and social development (Connection, Caring/Compassion, Contribution).

The program, Mindfulness Moments: Today and 4-Life, aimed to aid youth in physical practice component of Perkin's (2009) model through the posture practices that are completed by youth. Teaching youth various mindfulness practices to help manage stress and negative emotions and thoughts targeted the psychological development component of the model. Social

development was integrated through the component that involved discussing how mindfulness can help youth be more attentive and engaged 4-H members, friends, family members, and members of their community. Intention to apply posture practices, how youth think they will apply mindfulness, and how youth think they may use and value mindfulness will be assessed in the present study. Perkin's model is shown in Figure 2-2.

| Asset Category (Cs of positive youth development) | Individual Assets |
|--|--|
| Physical development (competence) | Good health habits |
| Intellectual development (competence) | Good health risk management skills |
| | Good mental health including positive self-regard |
| | Good emotional self-regulation skills |
| | Good coping skills |
| | Good conflict resolution skills |
| | Mastery motivation and positive achievement motivation |
| | Confidence in one's personal efficacy |
| | Planfulness - planning for the future and for future life events |
| | Sense of personal autonomy/responsibility for self |
| | Optimism couple with realism |
| | Coherent and positive personal and social identify |
| | Prosocial and culturally sensitive values |
| Intellectual development (competence) (<i>continued</i>) | Spirituality or a sense of a 'larger' purpose in life |
| | Strong moral character |
| | A commitment to good use of time |
| Psychological and emotional development (competence, confidence, character, caring/compassion) | Good mental health including positive self-regard |
| | Good emotional self-regulation skills |
| | Good coping skills |
| | Good conflict resolution skills |
| | Mastery motivation and positive achievement motivation |
| | Confidence in one's personal efficacy |
| | Planfulness- planning for the future and future life events |
| | Sense of personal autonomy/responsibility for self |
| | Optimism coupled with realism |
| | Coherent and positive personal and social identify |
| | Prosocial and culturally sensitive values |
| | Spirituality or a sense of a 'larger' purpose in life |
| | Strong moral character |
| | A commitment to good use of time |

| | |
|---|--|
| Social development (connection, caring/compassion, contribution) | <p>Connected – perceived good relationships and trust with parents, peers, and some other adults</p> <p>Sense of social place/integration – being connected and valued by larger social networks</p> <p>Attachment to prosocial/conventional institutions, such as school, church, non-school youth programs</p> <p>Ability to navigate in multiple cultural contexts</p> <p>Commitment civic engagement</p> |
|---|--|

Figure 2-2: Personal and Social Assets That Facilitate Positive Youth Development Aligned With Six Cs Of Community Youth Development.

Note: Source: Taken from Perkins, D. F. (2009). Community youth development. *Work with young people*, p. 104-113. London: SAGE Publishing.

Positive youth development is a holistic approach to preparing young people for their adult lives, and having a better understanding of the concept helps to better guide programming and research. The 5 C's Model and Six C's model helps youth development researchers and practitioners to better understand, implement, and evaluate positive youth development principles in their programs. An important part of positive youth development is youth leadership development (Edelman, et. al., 2004). The next section will discuss the concept of youth leadership development and leadership programs for young people.

Youth Leadership Development

When examining the concept of youth leadership development, it is important to define the concept, understand youth's views of leadership, explore currently available leadership programs for youth, and determine what youth leadership needs should guide future programming related to youth leadership development. Seemiller (2018) cited Zeldin and Camino's (1999) definition of youth leadership development, modified by Houghton and DiLiello (2009), which involves providing both structured and unstructured experiences to help youth learn leadership skills. This definition guided the review of literature for youth leadership development programs.

Most current leadership program studies focus on college student leadership. However, Gould and Voelker (2012) indicated the importance of youth leadership development at all levels due to today's global challenges. Current literature discusses the importance of fostering various intrapersonal and interpersonal leadership development skills, citing studies from various youth organizations. Youth need structured programs to develop the leadership skills needed to prepare them to face today's societal challenges outside of school and the academic year (Hill, Milliken, Goff, & Clark, 2015). Youth leadership program practitioners and researchers are working to provide relevant, high-quality leadership programming to address these issues. In addition, scholars and practitioners need to prioritize reporting the impacts of these programs, as there is not much documented impact for life skill development as a result of involvement in youth leadership programs (Allen & Lohman, 2016).

Youth leadership development studies cover a variety of areas of leadership and have demonstrated varying levels of success. There are many 21st century youth leadership programs operating in the United States. Many of these programs primarily focus on interpersonal leadership skills development and service learning (Black & Powell, 2012; Camino, 2005; Detzler, et. al., 2007; Diaz & Kosciw, 2012; Harris & Beckert, 2017; Henness, Ball, Moncheski, 2013; Klau, 2006; Mutchler, et. al., 2006; Parrish, et. al., 2008; Ray, 2016; Rosser, Stedman, Elbert, & Rutherford, 2009; Wheeler & Edlebeck, 2006).

Examples of youth leadership programs cited in the literature include 4-H, Boy Scouts, Facilitating Leadership in Youth, FFA, Girl Scouts, HOBY, GLSEN Jump-Start SOAR, HOPE Youth-Adult Partnership, Innovation Center for Community and Youth Development, Institute for Justice and Leadership, Jewish Leadership Organization youth program, Leadership Conference, Leaders in Training at Waycross Camp, My Brother's Keeper, National

Start2Finish, National Student Leadership Team, Rhode Island Teen Institute, and Youth Leader of Character Program (Apsler, Del Sesto, Formica, & Mulligan, 2010; Buschlen, Chang, & Kniess, 2018; Detzler, et. al., 2007; Erguner-Tekinalp & Crabtree-Goff, 2014, Ferris, Hershberg, Su, & Wang, 2015; Harris & Beckert, 2017; Harris, 2019; Horstmeier, Peiter, & Ricketts, 2009; Klau, 2006; Martin, 2018; National 4-H Council, 2019; Parrish, Wilhelm, Florez-Urcadez, & Jeffrey, 2008; Ray, 2016; Rosser, Stedman, Elbert, & Rutherford, 2009; Seemiller, 2018; Shaikh, Bean, & Forneris, 2019; Hemphill, Janke, Gordon, & Farrar, 2018; Wheeler & Edlebeck, 2006; Winchester, 2018). These youth leadership development programs have utilized the following approaches to foster youth leadership development: mentoring, sports-based education, arts education, community service projects, leadership conferences, anti-bullying education, social justice and advocacy, and community resource provision. Practitioners used both in- and out-of-school contexts to deliver programming.

Due to today's societal challenges, youth leadership development is critical to prepare youth for success in the future. Many intrapersonal and interpersonal leadership programs exist for youth in community contexts. However, there are not many studies regarding mindfulness programming for youth. The literature review will now examine mindfulness and how it came to be a secular practice in various settings. Then, the literature review will discuss how this programming has been applied and should be applied in the future in the context of the 4-H program.

Mindfulness Foundations

To consider mindfulness as a leadership program for youth, it is important to understand the historical foundations of the concept. This study defined mindfulness as “paying attention in a particular way: on purpose, in the present moment, and nonjudgmentally” (Kabat-Zin, 2012, p.

1). However, there are various definitions and approaches to the topic in the literature.

Mindfulness first originated within the meditation component of the Buddhist religion, which involves the development of bodily awareness, clarity, equanimity, and compassion (Williams & Kabat-Zinn, 2011). Mindfulness originated in Buddhism. Buddhism originated in the fifth century, which was developed based upon Buddha's teachings that were said to lead one to "happiness and spiritual freedom" (Bodhi, 2011). Mindfulness first referred to Buddhist meditation, which involves the "stilling and unification" of the mind. This practice is part of the Four Noble Truths of Buddhism. Mindfulness was brought to America by Jack Kornfield and Sharon Salzberg, who founded the Insight Meditation Society in 1976, after their time in Asian monasteries (Kristeller, 2007, p. 395). Practitioner of Tibetan meditation Chogyam Trungpa Rinpoche, who founded the Naropa Institute in 1970, also contributed to the onset of mindfulness practice in America (Kristeller, 2007, p. 395).

These modern teachers of Buddhism have deepened the definition of mindfulness (Cullen, 2011). Mindfulness can go beyond mental clarity, involving the ability to perceive the present moment without distraction by moods and emotions and the capacity to monitor one's own ability to pay attention (Cullen, 2011). There are three major settings to practice mindfulness, which will be discussed in the following sections. However, mindfulness in itself is not a religion and its universal values can be integrated in secular settings. Today, many instructors emphasize that mindfulness is not a religion and do not mention religion when teaching mindfulness practices.

Mindfulness for Adults in Secular Settings

Mindfulness first became formally introduced in a modern, secular, and clinical setting by John Kabat-Zinn in 1979 through the 'Mindfulness-Based Stress Reduction' (MBSR)

program at the University of Massachusetts Medical Center (Bodhi, 2011). MBSR is a program that teaches mindfulness meditation in a group setting, aiming to relieve physical and psychological suffering for individuals with physical, psychosomatic and psychiatric disorders (Grossman, Niemann, Schmidt, & Walach, 2003). The formal MBSR training includes the following components: mindful movement, the body scan, and sitting meditation (Cullen, 2011). In concert with the components, the program teaches participants how to apply various mindfulness concepts to their daily lives, in areas such as meals, perception, relationships, work, and stress management. MBSR programs have been known to provide various benefits to participants in various populations, including self-regulation in children (Zelazo & Lyons, 2012), reduction in anxiety and depression in veterans (Serpa, Taylor & Tillisch, 2014), and improved ability to engage in ethical decision-making in graduate students (Shapiro, Jazaieri & Golden, 2012), to name a few. Without making reference to religion or Buddhism, the MBSR technique systematically teaches participants to become more aware of experiences within each moment. This technique has been modeled in medical centers, hospitals, clinics, and psychotherapy practices (Bodhi, 2011).

Mindfulness programs, such as MBSR, have demonstrated positive impacts for adult participants. The effects of MBSR have been investigated by various researchers for the following health conditions: mental health disorders, eating disorders, psoriasis, diabetes, arthritis, HIV, cancer, and heart disease (Cullen, 2011). Studies suggest these programs can provide adults with the following benefits: increased ability to pay attention, improved ability to regulate emotions, increased activity in the area of the brain thought to regulate self-awareness, ability to redirect attention, reduced medical condition symptoms, increased ability to manage stress more effectively, lower physiological response to stress, decreased substance abuse, and

improved sleep quality (Greeson, 2008). A literature review of several major health science data bases and assembled papers on effects of MBSR found that MBSR can effectively reduce stress related to the pressures of daily life and chronic illness (Praissman, 2008).

Mindfulness Programs for Youth

Research suggests mindfulness programs can benefit adults, but scholars recommend more research on mindfulness programming for youth (Greenberg & Harris, 2012). Specifically, Greenberg and Harris (2011) identify the importance of “developing a more rigorous scientific base” for studies related to mindfulness programs for children, recommending future researchers pay attention to study design, developmental appropriateness, clarity of description of the programs or activities, and frequency and intensity of program and activities. Mindfulness studies among youth with demonstrated impact in school settings and community settings will now be discussed.

Youth Mindfulness Programs in Educational Settings

There are various approaches to teaching mindfulness to youth within a formal educational context. Programs within school settings often use mindfulness as a theoretical foundation, utilize a program manual, are taught by a trainer outside of the school system, and include at least one of the following common components: breath awareness, working with thoughts and emotions, psycho-education, application of mindfulness to daily life, group discussion, body-scan, home practice, kindness practice, body-practices (such as yoga), and mindful movement (Burke, 2009; Zenner, Herrnleben-Kurz, & Walach, 2014). Zenner, Herrnleben-Kurz, and Walach’s (2014) review of literature identified that the majority of studies in school settings utilized a manualized program, such as Learning to BREATHE or MindfulSchools (Biegel & Brown, 2010; Broderick and Metz, 2009; Franco Justo, 2009; Franco

Justo et. al., 2011; Joyce et. al., 2010; Mendelson et. al. 2010; Metz et. al. 2013; Napoli, Krech, & Holley, 2005; Potek, 2012; Schonert-Reichel & Lawlor, 2010; White, 2012). These reviewed programs were delivered in classrooms by both teachers and outside instructors. Program lengths varied from five weeks to 24 weeks. These mindfulness programs provided youth with various benefits.

The following benefits showed statistically significant improvements for youth who participated in mindfulness programs. Benefits for youth's mental health included reduced anxiety (Franco Justo et. al., 2011; Napoli, Krech, & Holley, 2005; Potek, 2012), reduced rumination on negative thoughts (Mendelson et. al. 2010), reduced occurrence of intrusive thoughts (Mendelson et. al. 2010; Metz et. al. 2013), reduced emotional arousal (Mendelson et. al. 2010), decreased negative effect or outlook (Broderick & Metz, 2009; Schonert-Reichel & Lawlor, 2010), improved executive control (Biegel & Brown, 2010), and reduced depression (Joyce et. al. 2010). The programs also provided significant improvements for youth by providing them with various soft skills, all of which occurred at a high level of significance. Increased soft skills included increased verbal creativity (Franco Justo, 2009), improved academic performance (Franco Justo et. al., 2011), improved social skills (Joyce et. al., 2010; Napoli, Krech, & Holley, 2005), increased in emotional regulation (Metz et. al. 2009; Schonert-Reichel & Lawlor, 2010; White, 2012), and improved behavior (Schonert-Reichel & Lawlor, 2010).

Mindfulness in Community Settings

In more recent years, scholars and practitioners of mindfulness have expanded beyond educational settings to teach mindfulness by testing youth mindfulness programs in community settings. Community mindfulness programs usually last 10-12 weeks (Berger, and Stein, 2009;

Bluth, Robeson, & Gaylord, 2015; Jee et. al., 2015). These programs may include the following activities: stress reduction techniques (Jee et. al., 2015); health and yoga teachings (Berger & Stein, 2009), or body awareness; understanding and working with thoughts; understanding and working with feelings; integrating awareness of thoughts, feelings and bodily sensations; reducing harmful self-judgments; and integrating mindful awareness into daily life (Bluth, Roberson, and Gaylord, 2015; Broderick, 2013). These studies demonstrated a variety of benefits for youth, including reduced stress and strategies to deal with stress (Bluth, Roberson, and Gaylord, 2015), increased self-awareness, reduced negative behaviors due to stress (Berger & Stein, 2009), improved balance (Berger & Stein, 2009), increased ability to pay attention (Bluth, Roberson, and Gaylord, 2015), improved self-compassion (Bluth, Roberson, and Gaylord, 2015), and increased life satisfaction (Bluth, Roberson, and Gaylord, 2015).

These studies took place in afterschool or community programs, but scholars have also begun to explore mindfulness programs in a camp setting. Community education programs that involve day and residential camps may be an effective vehicle for teaching mindfulness to youth. However, there is little research on implementing mindfulness programming in a youth camping context (Frauman, 2011). Gillard, Roark, Nyaga, and Bialcheski (2011) explored mindfulness in this context. This was the first of only a few existing studies that examined mindfulness in the context of a youth residential camp. The authors examined mindfulness practices of camp instructors. There was no mindfulness program provided to the adults at the camp; the study simply measured state mindfulness for the camp staff.

Liehr and Diaz (2010) was another mindfulness programming study in a youth camping context. However, youth were recruited youth from a summer day camp for their study, not a residential camp. The program was taught each day, Monday through Friday, at the camp for two

weeks. The lessons were 50 minutes in length. The Mindful Schools curriculum was utilized. Mindfulness practices taught to youth participants included breath awareness, mindful movement, and generosity. Two groups were studied and compared. One group received health education on physical activity, diet, and managing stress. The other group received the mindfulness program. Both of the groups had significant reduction in anxiety symptoms. The mindfulness program group had a larger reduction in anxiety than the group that received the health education program.

Youth mindfulness was also assessed in a camp setting through an Extension study on 4-H Military Kids camp (Le, 2014). The program was a mindfulness-based adventure camp held in partnership with 4-H Extension Professionals/Operations Military Kids. The Mind Body Awareness program included the following mindfulness practices: body awareness, emotional awareness, empathy, acceptance, and interconnectedness. The program was taught each day at the four-day camp. When asked which activity at the program benefitted youth the most to handle stress, mindfulness was ranked first. One third of participants also indicated that mindfulness was the activity at camp that most helped them form new friendships. Qualitative data indicated that both youth and counselors found the program beneficial in reducing stress. Mindfulness practice has been established as a method to teach stress management in secular settings. Studies of youth mindfulness programs have yielded significant benefits for youth in both school and community settings. There are few studies on mindfulness programs in community settings, especially within a camp context. Only one of the three existing studies examined and demonstrated impact of a youth mindfulness program within a residential 4-H camp setting.

Stress Management Education through Mindfulness Practice

Youth practitioners have used mindfulness programs to help youth manage stress. There are existing program curricula to teach youth stress management through mindfulness practice (Broderick & Frank, 2014; Banks & Bercaw, 2018). Studies have shown the implementation of the Learning to BREATHE (Broderick, 2013) program has been successful in schools.

Mindfulness programs within both clinical and non-clinical settings indicated that there are benefits for children to practicing mindfulness. Studies providing clinical instruction on mindfulness techniques for children with various health concerns showed improvements in lowered anxiety and depression levels, decreased behavior problems, decreased symptoms of physical health conditions for subjects, lowered fatigue, decreased ADHD symptoms, decreased obesity rates, and improved mental health (Burke, 2009; Semple, Lee, Rosa & Miller, 2010).

Several pilot studies in grade school and high school settings that showed improvement in mental health and behavior (Mendelson, et. al., 2010; Noggle, Steiner, Minami & Khalsa, 2012; Broderick & Metz, 2009; Flook et al, 2010; Schonert-Rechl & Lawlor, 2010). However, more studies of mindfulness in the context of a preventative, leadership development program for healthy youth are needed to determine how mindfulness programs in community settings might help youth learn about mindfulness to gain stress management competence.

Youth Development through Intrapersonal Leadership Development and Stress Management

Despite the plethora of available leadership development programs for American youth, scholars have called for more programming to help youth better understand themselves, or to foster intrapersonal leader development (Horstmeier & Nall, 2007). Several programs foster various intrapersonal skills development, promoting values development, identity development,

and confidence development (Erguner-Tekinalp & Crabtree-Goff, 2014; Harris, 2019; Horstmeier, Peiter, & Ricketts, 2009; Klau, 2006; Martin, 2018; Rogelberg, Uhrich, Caudill, Gur & Moffit, 2016; Tetloff & Griffith, 2008). However, few of these programs touch on stress management and emotional regulation as a component of self-leadership. The programs that do mention these concepts (Erguner-Tekinalp & Crabtree-Goff, 2014; Rogelberg, Uhrich, Caudill, Gur & Moffit, 2016) mention helping youth participants overcome negative bias experiences, providing youth with life skills and knowledge, teaching coping skills to improve mindset, or simply putting youth in an environment that forces them to develop stress management competence. However, developing stress management skills was not the primary goal of any of the reviewed programs. The same sentiment was demonstrated in a study examining impact of an FFA leadership conference (Stedman, Rutherford, Rosser, & Elbert, 2009). Authors mentioned teaching personal wellness as part of leadership development for high school youth FFA members during the conference (Stedman, Rutherford, Rosser, & Elbert, 2009). However, this area increased least when compared to other examined leader and leadership development areas for participants, and authors attribute this due to youth not being able to practice and apply leadership concepts related to personal wellness during the program. Youth need intrapersonal leadership opportunities where emotional intelligence for stress management is a primary goal of the leadership program. To retain this stress management skill, youth need to be given the opportunity to apply these concepts during the program.

Seemiller's (2018) youth leadership competency model supports this, identifying resiliency, self-understanding, and social emotional learning as key elements for today's youth leadership programs. Stress management education, in the form of an intrapersonal leadership program focused on mindfulness, might help youth develop these competencies (Hupert &

Johnson, 2010; Sibinga, et. al., 2011; Sibinga, et. al., 2014). Therefore, stress management should be an area of youth leadership development further investigated by scholars.

Overview of the Cooperative Extension System and the 4-H Program

In order to understand the 4-H program and the context of the present study, one must understand the Cooperative Extension System. Cooperative Extension has provided non-biased, research-based educational programming to Americans for over 100 years. The Cooperative Extension system is led by American land-grant universities and the United States Department of Agriculture (USDA, 2019). The Lincoln and Morrill Act created this system in 1865, providing each state with land to develop an agricultural research station to conduct agricultural research for their state (USDA, 2019). This act also promoted educating both students within the college and local community members on agricultural discoveries and technologies (USDA, 2019). Extension now provides research-based programming under topics outside of agriculture. The 4-H program falls under the Extension program area of Families, Youth and Communities and provides research-based, non-formal education and leadership development to the youth of America. The 4-H program was established in the early 1900s (Van Horn, Flanagan & Thomson, 1998). Although 4-H's original focus was on farming and homemaking, the majority of 4-H participants no longer choose projects in these areas. Today, the most popular 4-H project is STEM (Science Technology Engineering Math), with over 5 million science projects being taken annually and nationally (National 4-H Council, 2019).

In addition to providing knowledge on a variety of topics through projects and club work, 4-H has provided leadership development opportunities to youth since the program's beginnings (Hoover, Scholl, Dunigan, & Mamontova, 2007). 4-H leadership opportunities helped foster personal growth for youth (Hoover, Scholl, Dunigan, & Mamontova, 2007). Youth accomplished

this by completing projects and presenting the results to their peers through demonstrations and illustrated talks (Hoover, Scholl, Dunigan, & Mamontova, 2007), which still continues today. 4-H youth can also participate in conferences, school-based enrichment activities, and programming within camp settings to enhance their leadership development (Hoover, Scholl & Dunigan, & Mamontova, 2007).

Studies to demonstrate the impact of 4-H leadership development and 4-H camp have been conducted since the early days of 4-H. The first study of a 4-H camp was in 1924, and the first 4-H leadership and character development study was conducted in 1926 (Scholl & Paster, 2011). Leadership studies became the most popular 4-H studies the 1980s (Scholl & Paster, 2011), and continue to hold popularity for Extension educators hoping to share impacts with county commissioners and funding groups.

Leadership studies within 4-H camp settings and with a focus on mindfulness programs are needed. Garton, Miltenberger and Pruett (2007) identified a need for a 4-H camp curriculum development for life and leadership skills. Le (2014) argued that mindfulness programs are an effective way for 4-H educators to work with youth. Le (2014) also calls for more research on mindfulness within 4-H military kids camping programs. Based on positive results within a military kids 4-H camp setting, these results may be able to be replicated in a general 4-H camp setting. Due to the gap in the literature, studies are needed to further investigate teaching mindfulness programs within a 4-H camp setting to foster youth's intrapersonal leadership development. The present study aligns with the path of 4-H youth development research over time.

Cooperative Extension, the 4-H program, and 4-H's lines of research inquiry for leadership programming may have changed throughout the years, but 4-H's mission of positive

leadership development for youth has remained the same. 4-H camp still remains a well-established vehicle for fostering positive youth development and youth leadership development. 4-H camp may be an effective place to teach mindfulness as a leadership development skill to youth.

Youth Development within Extension and 4-H Camp Settings

One of 4-H's most well-known and beloved vehicles for programming is 4-H camp. The 4-H program (Arnold, Bourdeau & Nagele, 2005; Brandt & Arnold, 2006; Garst & Bruce, 2003; Garton, Miltenberger & Pruett, 2007; Hedrick, Homan, & Dick, 2009), and other youth development programs (Bialeschki, Henderson & James, 2007; Ferrari & McNeely, 2007; Schelbe, Hansen, France, Rony & Twichell, 2018; Thurber, Scanlin, Scheuler & Henderson, 2007) have identified summer camp as a place where youth can develop life skills, leader and leadership skills, social skills, and spirituality. Organized camp settings have fostered positive youth development for over 150 years in the United States, helping youth participants develop affectively, cognitively, behaviorally, physically, socially, and spiritually through various educational activities (Garst, Browne & Bialeschki, 2011). Authors identified the following characteristics that encourage development among campers, outcomes for youth and staff participating in camps, and strategies to measure developmental outcomes in camp settings.

- Both setting and programming characteristics are important. The outdoor, remote environment that most camps provide is a major factor affecting positive youth development; being away from day-to-day stressors and routines and immersed in nature can provide restoration and relaxation for campers.

- Youth practitioners should integrate both structured and unstructured activity into camps, provide opportunities for experiential learning, and provide opportunities for youth to choose the activities they participate in.

Leadership Development for Youth through the 4-H Extension Program

4-H has offered various leadership programming for youth throughout the years. Although many youth leadership development opportunities exist within the United States, today's American youth are disappointed in the state of the country's leadership, and leadership development programs for youth need to take action (National 4-H Council, 2016). According to the 4-H National Youth Survey on Leadership, youth identified lack of clear vision as one of the major issues causing weak leadership in our nation (National 4-H Council, 2016). Lack of vision is an issue related to intrapersonal or leader development, which is personal development related to self-awareness and self-motivation (Day, 2000). Interpersonal, or leadership development, focuses on social awareness and social skills (Day, 2000). Intrapersonal and interpersonal leadership skills do not develop naturally in youth, and youth educators and program practitioners must take the time to teach them these skills (Ivy, Richards, Lawson, and Alameda-Lawson, 2018).

Stress management is one leader skill that does not occur naturally in youth. 4-H may be an effective vehicle for providing stress management education to 4-H members. The 4-H program provides youth with opportunities to develop leader and leadership competencies in various contexts (Hoover, Scholl, Dunigan, & Mamontova, 2007). Within 21st century 4-H Extension programs, many youth leadership programs include an interpersonal development component (Allen & Lohman, 2016; Arnold, 2003; Black & Powell, 2012; Boyd, 2001; Bruce, Boyd & Dooley, 2004; Bush, Grove, Johnson, Price, & Seibel, 2019; Camino, 2005; Cowan &

Smith, 2010; Jones, 2009; Hennes, Ball, Moncheski, 2013; Kolondinsky, Cranwell, and Rowe, 2002; Krehbiel, Fenton & Fairchild, 2015; Laughlin, Peutz & Cheldelin, 2005; Leggette, Lawrence, Merten & McGuill, 2013; Merkowitz & Earnest, 2006; Mutchler, et. al., 2006; Real & Harlin, 2006; Ripberger, 2008; Smith, Genry & Ketring, 2005; Torretta, 2007). Many existing leadership programs for youth also include an intrapersonal development component (Black & Powell, 2012; Boyd, 2001 Bruce, Boyd & Dooley, 2004; Bush, Grove, Johnson, Price & Seibel, 2019; Camino, 2005; Cowan & Smith, 2010; Kolondinsky, Cranwell, and Rowe, 2002; Ripberger, 2008; Krehbiel, Fenton, & Fairchild 2015; Leggettee, Lawrence, Merten, & McGuill, 2013; Merkowitz & Earnest, 2006; Mutchler, et. al., 2006; Real & Harlin, 2006; Smith, Genry, & Ketring, 2005; Torretta, 2007). The literature shows that leadership programs promote community service opportunities that allow youth to experience various leadership positions, such as a community board member (Bading, Boyd, Lawver, Ulmer, & Boleman, 2012), facilitator (Kolondinsky, Cranwell, and Rowe, 2002), event planner (Cowan & Smith, 2010), or resource provider (Ross & Connors, 2018). Promoting citizenship as a component of leadership is a common goal of many of these reviewed youth leadership programs.

Although 4-H leadership programs exist that have proven impact for both intrapersonal and interpersonal leadership development, especially in the areas of service learning and civic involvement, only one of them directly mentioned the importance of mental health and well-being (Black & Powell, 2012). Black and Powell's (2012) program promoted intrapersonal leader development for youth participants by training 4-H youth in natural disaster response. However, leader development for stress management was not a major focus of the program; youth naturally gained this competency by being placed in a stressful situation. It is important for Extension to offer stress management educational programs for youth because "the effects of

negative and unchecked emotional stress... are...costly" (Merkowitz & Earnest, 2006, p.1).

Because previous 4-H programs did not indicate a direct approach to teaching stress management, this demonstrates a gap in the literature. Past approaches to youth leader and leadership development perpetuates Extension's old, reactive way of thinking rather than aligning with the new line of proactive thinking. This shift is also occurring in the field of youth developmental psychology; research is now shifting toward promoting positive psychology rather than striving to understand psychopathology (Klau, 2006). As previously mentioned, mental and emotional issues for youth, and all Americans, are on the rise, and a youth mindfulness program may be an effective approach to address this issue. 4-H has begun using mindfulness practice for stress education, yet few studies exist on the topic.

Mindfulness Programs in 4-H Settings

To address and prevent mental health issues, mindfulness programs have been used as a proactive training for youth as a way to manage stress by previous scholars and practitioners (Biegel, 2017; Broderick & Metz, 2009), and results suggest benefits for youth in school settings (Broderick & Metz, 2009; Zoogman, Goldberg, Hoyt, & Miller, 2015). In addition, National 4-H recently published a peer-reviewed curriculum for teaching mindfulness and stress management to 4-H youth (Banks & Bercaw, 2018). Another mindfulness program has been published by national 4-H for youth ages 5-8 (Iaccopucci, Soule, & Lewis, 2019). Only one study has examined the impact of mindfulness programs for youth in a 4-H Extension program (Le, 2014). Moreover, if 4-H develops youth leadership capacity and provides various leadership opportunities, the organization should also teach youth how to handle stress that may accompany these opportunities, in addition to stress they may encounter in their personal lives.

Due to past success in teaching life skills in these venues, camps and conferences may be an effective setting to teach mindfulness skills to 4-H youth. These settings have shown to be effective ways to promote leader and leadership development among youth. At previous 4-H leadership conferences and retreats, youth developed an understanding of the concept of leadership (Arnold, 2003), improved their self-perception (Leggette, Lawrence, Merten, & McGuill, 2013), learned about themselves and experienced personal growth (Bush, et. al., 2019; Schmitt-McQuitty, Subramaniam, & Stanley, 2007), learned to set goals and solve problems (Leggette, Lawrence, Merten, & McGuill, 2013; Schmitt-McQuitty, Subramaniam, & Stanley, 2007), learned to identify needs and manage time (Garst et. al., 2006), expanded their knowledge about diversity (Bush, et. al., 2019), increased their interpersonal skills (Allen & Lohman, 2016), developed responsibility (Bird & Subramaniam, 2018), and improved communication skills (Allen & Lohman, 2016; Green & Davis, 2012; Schmitt-McQuitty, Subramaniam, & Stanley, 2007). In addition, stand-alone events in a 4-H youth development context have also demonstrated effectiveness for promoting youth leadership development (Hoffman, 2011). Therefore, a standalone leader development workshop at a 4-H camp or conference may be an effective way to teach stress management through mindfulness to 4-H youth.

Factors Contributing to Youth Value of Mindful Living

Camp has been an effective vehicle for 4-H programming in the past, and may also be an effective place to help youth learn the value of mindful living. In order to understand the factors that may contribute to youth value of mindful living, one can consult researchers' variety of approaches to measuring mindfulness. Existing studies have assessed general mindfulness on both a single factor scale (Brown, West, Loverich & Biegel, 2011; Greco, Baer, & Smith, 2011; Walach, et. al., 2006) and multiple factor scales (Baer, Smith & Allen, 2004; Baer, Smith,

Hopkins, Krietemeyer & Toney, 2006; Cardaciotto, Herbert, Forman, Moitra & Farrow, 2008; Feldman, et. al., 2007; Li, Black & Garland, 2016; Tanay & Bernstein, 2013). In mindfulness multiple factor studies, researchers measured multiple factors of mindfulness. Among these factors were decentering, positive emotional regulation, and negative emotional regulation (Li, Black & Garland, 2016); attention, present focus, awareness and acceptance (Feldman, et. al., 2007); state mindfulness of mind and state mindfulness of body (Tanay & Bernstein, 2013); awareness and acceptance (Cardaciotto, Herbert, Forman, Moitra & Farrow, 2008); observe, describe, act with awareness, and accept without judgment (Baer, Smith & Allen, 2004); and observe, describe, act with awareness, nonjudge, and nonreact (Baer, Smith, Hopkins, Krietemeyer & Toney, 2006).

An individual's personal development of these different factors of mindfulness may contribute to an individual's value of mindful living. Mindful living is the state where "individuals apply heightened awareness to their relationships, health behaviors, and activities of daily life, while considering the impact of these on society" (Niemec, 2012, p. 22). Factors of mindfulness listed above may contribute to this construct, but previous studies assessed mindfulness over several week programs or served as a baseline to measure state mindfulness. The present study took place during a workshop session, not over a several week program, so a different approach to measuring mindfulness needed to be taken. The researcher decided to measure and investigate state level mindfulness, rather than trait mindfulness. Trait mindfulness looks at the development of mindfulness traits and characteristics in an individual over time, usually several weeks, while state mindfulness looks at one's experience of mindfulness during a short period of time, such as during a two-hour workshop.

Tanay and Bernstein's (2013) mindfulness two-level model of state mindfulness (as cited in Ruimi, Hadash, Tanay & Bernstein, 2019) (Figure 2-3) served as the theoretical framework for this survey development to study state level. Tanay and Bernstein (2013) created the State Mindfulness Scale (SMS) to measure physical sensations and mental events in adults during a mindfulness session program. The authors wrote that this instrument was created to measure the nature of the mental quality of state mindfulness. The authors tested their instrument with four different groups of adults involved in a mindfulness program to establish reliability for their instrument. Overall, the SMS had a reliability of at least .92 Cronbach's alpha in all four samples of adults. The authors explain that they hope their instrument should "(a) broadly contribute to study of mindfulness as a statelike mental behavior in addition to a trait, process, and practice; (b) contribute to research on the mechanisms of mindfulness, from psychological to neurocognitive levels of analysis, by permitting sound measurement of mindfulness as a statelike mental behavior in the present moment; and (c) provide clinicians and researchers a simple, yet robust tool with which to evaluate state mindfulness" (p. 1297). Because the instrument was a new measure, authors conducted Exploratory Factor Analysis (EFA), identifying an interfactor correlation ($r=.56, p<.01$). Confirmatory Factor Analysis (CFA), was conducted, and goodness of fit was determined to be .66–.81 for state mindfulness of the mind subscale and .62-.88 for state mindfulness of the body subscale after utilizing the instrument with multiple samples.

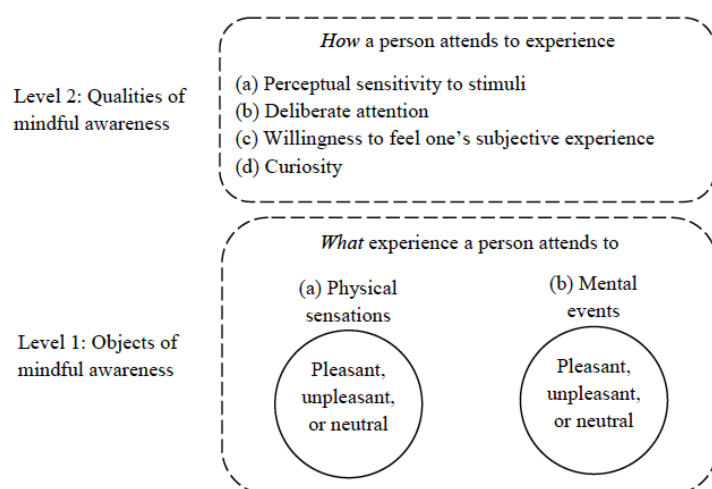


Figure 2-3: Tanay & Bernstein's two-level model of state mindfulness.

Note: Source: Tanay, G., & Bernstein, A. (2013). State Mindfulness Scale (SMS): Development and initial validation. *Psychological assessment*, 25(4), 1286.

Other authors used the SMS instrument. Cox, Ullrich-French, and French (2016) used this instrument with a group of adults during physical activities. They modified the instrument to apply to a physical activity context rather than the context of a mindfulness program. The authors worked with a panel of graduate students and experts to make the instrument relevant to their study by adding additional items. Through exploratory factor analysis and cluster factor analysis, the authors decided to eliminate some items from the scale. Their analysis also confirmed that state mindfulness of the mind and state mindfulness of the body were two distinct measures within the construct of state mindfulness.

Although Tanay and Bernstein's (2013) instrument measured physical sensations and mental events during mindfulness programs, no items measured emotional experience. Ruimi, Hadash, Tanay and Bernstein (2013) theorized that level 2 of Tanay and Bertstein's model (2013), which was related to the qualities of mindful awareness and how a person relates to their experience, could not be measured by a separate scale. However, the researcher felt perceptions

of emotions and nonjudgement should be measured and assessed as another factor of mindfulness due to inclusion of this factor in other models measuring mindfulness (Li, Black & Garland, 2016; Baer, Smith & Allen, 2004; Baer, Smith, Hopkins, Krietemeyer & Toney, 2006). Therefore, the researcher adapted and modified items from the Nonjudge subscale of the FFMQ. However, the FFMQ was designed to measure change in mindfulness overtime (trait mindfulness), not in the case of a mindfulness session (state mindfulness). Therefore, the researcher adapted the wording of the instrument for the context of a mindfulness program session. This newly adapted scale allowed the researcher to assess how youths' perception of their emotional experience, and allowed the researcher to contribute to development of Tanay & Bernstein's (2013) state mindfulness model.

Despite being able to locate measures to contribute to measuring mindfulness, the researcher could not locate a scale that measured youth value of mindful living. Value of mindful living is not incorporated into Tany and Bernstein's model (2013). Therefore, items were developed after consulting Extension educators, Extension specialists, and experts within the areas of youth development, research, and mindfulness. Item creation was guided by Niemec's (2012) definition of mindful living, which is described as a state of being where "individuals apply heightened awareness to their relationships, health behaviors, and activities of daily life, while considering the impact of these on society." This definition also aided in the creation of the program, which will be further discussed in chapter 3.

The researcher assessed how the factors of youth state mindfulness during the program affect 4-H youth value of mindful living. Now, each of the constructs of the instrument for the present study will be discussed in more detail.

Instrument Constructs

Awareness of Mental Events

Awareness of mental events has been assessed in previous youth mindfulness studies. Awareness of mental events involves being aware of thoughts, feelings, and emotions occurring within the mind. Teasdale and colleagues (2002) discussed this concept using the term “metacognitive awareness,” explaining that one can separate thoughts, feelings, and emotions from oneself and consider them in an objective way. Mindfulness aims to teach detachment and distancing oneself from mental events (Shapiro, Carlson, Astin, & Freedman, 2006), so it is important to determine whether or not participants are experiencing this during a mindfulness program. Awareness of mental events has been referred to as simply “awareness” (Cardaciotto, Herbert, Forman, Moitra & Farrow, 2008; Feldman, et. al., 2007), “state mindfulness of the mind” (Tanay & Bernstein, 2013), and “observe”, which included both observation of events occurring in the mind and in the body (Baer, Smith, Hopkins, Krietemeyer & Toney, 2006). Various studies that assessed awareness of mental events in mindfulness programs will now be further discussed.

Cardaciotto, et. al. (2008) and Feldman et. al. (2007) used the Mindful Attention & Awareness scale (MAAS) (Feldman, et. al., 2007) to measure awareness. This subscale evaluated whether or not participants were paying attention to events occurring within their minds and within their surroundings. The Awareness subscale had a Cronbach’s alpha of .85. Tanay and Bernstein (2013) measured state mindfulness of the mind with adults. No study had been done on state mindfulness with youth, but their instrument was adapted for youth participants in the present study. The Awareness subscale of their instrument, the SMS, had a Cronbach’s alpha of .95.

Baer, Smith, Hopkins, Krietemeyer, and Toney (2006) used the Cognitive Failures Questionnaire (CFQ) (Wallace, Kass, & Stanny, 2002) to determine whether or not participants made “simple errors due to inattention” (p. 31), asking questions about the frequency of misplacing items or forgetting what task they intended to complete. The scale had a Cronbach’s alpha of .89.

Mendelson and colleagues (2010) examined rumination, intrusive thoughts, and emotional arousal for youth study participants. They measured these subscales using the Involuntary Engagement Coping Scale (Connor-Smith, Compas, Wadsworth, Thomsen, & Saltzman, 2002). The questionnaire assessed the frequency in which youth experienced ruminating on negative events, having negative thoughts, and emotional arousal. The scale had a Cronach’s alpha of .79.

Broderick and Metz (2009) measured youth’s occurrence of negative affect and negative emotions, determining how often youth had a negative outlook or experienced unwanted emotions. The authors used the Positive and Negative Affect Scale (PANAS) (Weston et. al., 1988) (Cronbach alpha = 0.81) and the Difficulties in Emotional Regulation Scale (DERS) (Gratz & Roemer, 2004), (Cronbach alpha ranging from 0.76 to 0.88 for each subscale). Metz and colleagues (2013) measured youth’s Psychosomatic Complaints, or frequency in youth experiencing negative thoughts and emotions, and Lack of Emotional Awareness. These subscales of the authors’ newly created instrument had a Cronbach’s alpha of .884 and .797, respectively.

Schonert-Reichel and Lawlor (2010) assessed positive affect in youth. They also used the PANAS (Weston et. al., 1988) to assess these constructs.

Bluth, Roberson, and Gaylord (2015) measured youth's perceived reduced stress as a part of their study of a youth mindfulness program. The authors used the Perceived Stress Scale (PSS) (Cohen, Kamarck, & Mermelstein, 1983), which assessed the degree of stress subjects are under. The Cronbach's alpha was reported at .86.

In sum, there have been a variety of measures that have assessed and demonstrated impact of awareness of mental events within youth mindfulness studies. However, only one of these studies examined a mindfulness program that was one session, rather than evaluating participants over several weeks, and it was for a study with adults (Tanay & Berstein, 2013). The other studies were helpful in defining the concept of Awareness of Mental Events, but this construct of the instrument mainly drew upon Tanay and Berstein's (2013) work with state mindfulness, with wording revisions to apply to a youth population. Now, the construct Awareness of Physical Sensations will be discussed.

Awareness of Physical Sensations

Awareness of Physical Sensations as a factor of mindfulness involves observing what is felt in the body. This may include noticing body-mind connection, the temperature in a space, the sense of touch, or anything else a person can physically sense. This also involves the ability to bring awareness to the five senses. Previous mindfulness studies have examined this concept and reported reliable measures. The awareness of physical sensations construct is most commonly referred to as Observation or Awareness.

Schonert-Reichel and Lawlor (2010) assessed Awareness of Physical Sensations by measuring attention of youth participants in their mindfulness program. Scholars used the Teachers' Rating Scale of Social Competence (TRSC; Kam and Greenberg 1998) to assess change in youth participant's ability to pay attention in school as a result of the mindfulness

program. This was measured with the Attention and Concentration Subscale, which has a Cronbach's alpha of .95.

Bluth, Roberson, and Gaylord (2015) assessed youth's attention to the present moment using the Children and Adolescent Mindfulness Measure (CAMM) (Greco, Baer, & Smith, 2011). The authors used the instrument to conduct a pre and post-program test to measure change in participants. Cronbach's alpha was reported at .82.

Baer, Smith, and Allen (2004) developed a scale that was used with undergraduate students to assess factors of mindfulness. One identified subscale was Observe. Items from this construct measured attention to events happening within the body, sensations from the environment, and sounds. The authors also included observing thoughts and feelings within this construct. The authors reported Cronbach's alpha at .91 for this observation subscale. This instrument evaluated in general how participants viewed their ability to observe and did not assess their awareness during a mindfulness session.

In Tanay and Bernstein's study (2013), which assessed state mindfulness in a group of adults, one scale measured state mindfulness of the body. Items asked about sensations participants felt within the body, questions about the physical environment, and how they felt to moving their bodies. The state mindfulness of body subscale had a Cronbach's alpha of .89. All of these studies were helpful in defining the concept of Awareness of Physical Sensations, but this construct of the instrument mainly drew upon Tanay and Bernstein's (2013) instrument to study state mindfulness, with wording revisions to apply to a youth mindfulness program context. Also, Tanay and Bernstein's (2013) study was the only one that measured mindfulness as a state during a workshop session, rather than a trait overtime. The next factor of mindfulness that will be discussed is Non-Judgment of Emotional Experience.

Non-Judgment of Emotional Experience

Non-Judgment of Emotional Experience involves accepting one's emotional experience, without labeling it as good or bad. This approach involves the individual making peace with thoughts, emotions, and feelings rather than allowing them to impact one's mood or self-worth. This concept has taken different names in previously published literature. Bluth, Roberson, and Gaylord (2015) assessed ability to not judge one's internal experiences using the Children and Adolescent Mindfulness Measure (CAMM) (Greco, Baer, & Smith, 2011). Participants in this study took a pre and posttest after participating in the program. The instrument assesses awareness of the present moment and ability to accept one's internal emotional experiences. The Cronbach's alpha for this instrument is .82.

Broderick and Metz (2009) assessed Non-Judgment of emotional experience as self-acceptance. Their self-acceptance subscale, "Non-acceptance of Emotional Response," was part of the Difficulties in Emotion Regulation Scale (DERS) (Gratz & Roemer, 2004). Items assessed whether difficult emotions and internal experiences caused participants to feel guilty or ashamed. This Cronbach's alpha for this subscale was .88.

Self-compassion scales have also been used to assess one's ability to not judge themselves. Neff's (2003) Self Compassion Scale (SCS) has been used with youth populations to assess self-compassion, or the ability to view negative experiences as opportunity to grow rather than letting these experiences detriment self worth (Neff & Vonk, 2009, as cited by Zeller, Yuval, Nitzan-Assayang, & Bernstein, 2015). Zeller, Yuval, Nitzan-Assayang and Berstein (2015) used the SCS to measure self-compassion in youth. Constructs in this measure include self-kindness, self-judgement, common humanity, isolation, mindfulness, and over-identification. Authors reported Cronbach's alpha at .64, although it had been reported higher in

previous studies (Neff, 2003). Barry, Loflin, and Doucette (2015) also used the SCS with at-risk males ages 16-18 and reported Cronbach's alpha at .78. Mosewich, Kowalski, Sabiston, Sedgwick, and Tracy (2011) used the SCS with a sample of young women involved in sports and a program to promote self-esteem. They reported the Cronbach's alpha at .78 as well. Bluth and Eisenlohr-Moul (2017) used this scale as part of the assessment for a teen mindfulness compassion program, and established it as reliable for youth populations ($\alpha = 0.77$ (pre), 0.80 (post), and 0.79 (follow-up)).

The Five Facet Mindfulness Questionnaire (FFMQ) (Baer, Smith, Hopkins, Krietemeyer & Toney, 2006) also contains a Non-Judgment construct. In this scale, Non-Judgment items assess the degree to which an individual judges themselves for internal experiences related to negative thoughts and emotions. Cronbach's alpha for this scale was reported as .87 (Baer, Smith, Hopkins, Krietemeyer & Toney, 2006).

All of these scales measured mindfulness as a trait, not as a state during a mindfulness workshop session. Again, trait mindfulness refers to mindfulness as a skill that can be practiced and improved overtime, while state mindfulness refers to an individual's awareness during a specific amount of time. Items from the reviewed scales to measure Non Judgment of Emotional Experience are usually used to assess change overtime in participants' levels of mindfulness in a program taking place over several weeks. These items are also used to assess how individuals generally behave. The present study aimed to examine how youth experienced non-judgment of emotional events during the workshop session, not in general. Therefore, items were adapted from the FFMQ (Baer, Smith, Hopkins, Krietemeyer & Toney, 2006) to fit a state mindfulness context and to apply to the present study. Revisions had to be made to make the instrument apply to a workshop session setting rather than the context of a several week study.

Youth Value of Mindful Living

Niemec (2012) defined mindful living, which is described as a state of being where “individuals apply heightened awareness to their relationships, health behaviors, and activities of daily life, while considering the impact of these on society” (p.22). Essentially, mindful living is the application of mindfulness as a holistic lifestyle, rather than a task an individual sets time aside for each day. Mindfulness is defined many ways and cited many times in academic and popular literature. However, the constructs of mindful living and youth mindful living are not. The researcher could not locate an academic definition of youth mindful living or an instrument that assessed youth value of mindful living. Niemec’s (2012) definition of mindful living guided the development of this instrument construct for the present study.

Although there was not mention of mindful living explicitly in the academic literature, there was mention of the construct within popular literature. Within online media, available definitions of the construct include “taking action with intention” (Punches, 2017), “learning to be present in your life” (Meridian Counseling, 2019), and “bringing awareness, creativity, and intention to our daily lives” (Mindful Living Blog, n.d.). Most previous research has measured whether or not people have mindfulness as a trait or whether or not they practice it. Mindfulness studies have not examined whether or not people value applying it in their daily lives or why people value mindfulness. However, this line of inquiry could be useful for researchers and practitioners of mindfulness programs to demonstrate impact. To address this gap in the literature, the researcher adapted a scale to measure this construct in youth within the program.

Conceptual Framework

The review of literature, especially the youth factors of state mindfulness and youth value of mindful living, informed the conceptual framework. Both the evaluation questions and

research questions are reflected in the framework, which is presented in Figure 2-4.

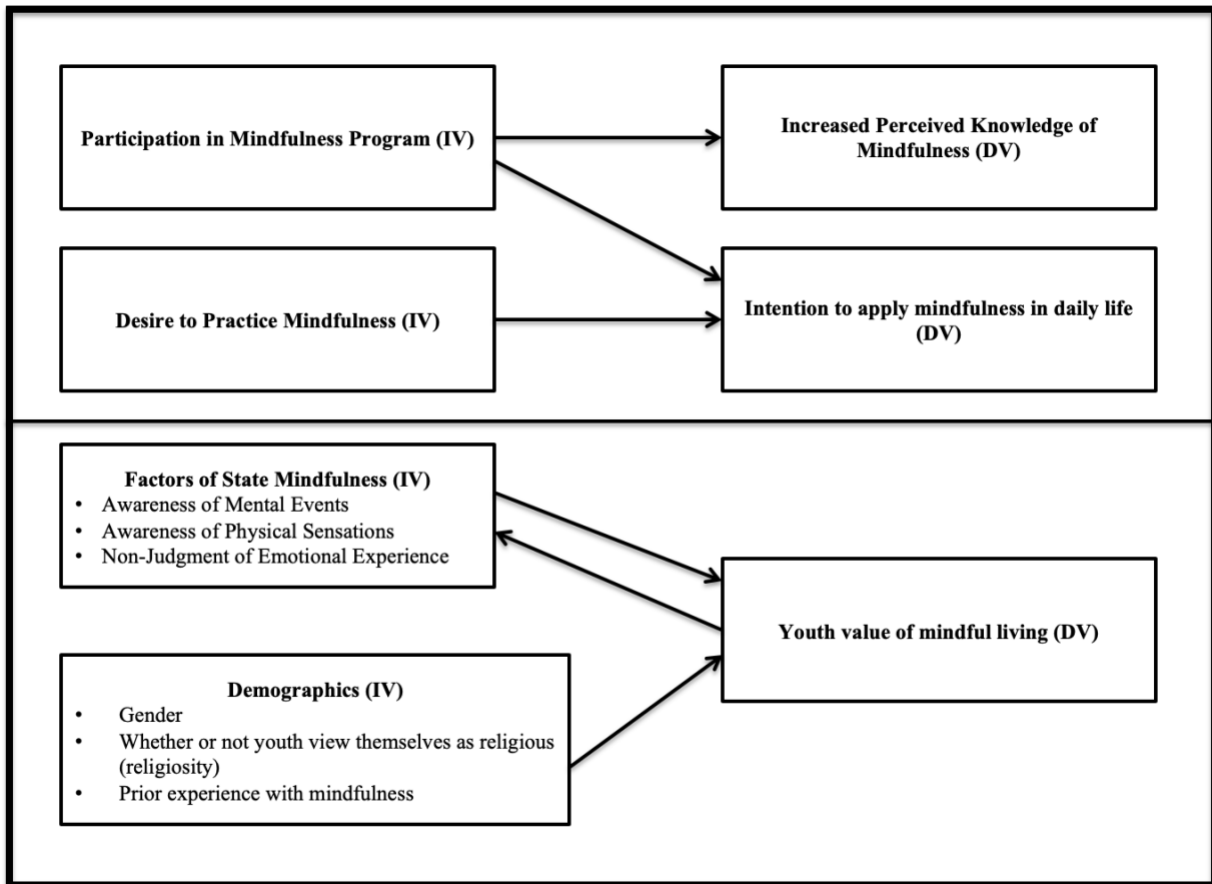


Figure 2-4: Conceptual Framework.

Note: The direction of arrows demonstrates the relationships among variables of interest.

For the evaluation questions, the model shows the relationships among the following variables: participation in mindfulness program, increased perceived knowledge of mindfulness, desire to practice mindfulness, and intention to apply mindfulness in daily life. The dependent variables for the evaluation questions are increased perceived knowledge of mindfulness and intention to apply mindfulness in daily life. The independent variables are participation in mindfulness program and desire to practice mindfulness. The direction of the arrows illustrates the relationship among variables in the conceptual model. Based on the literature review and conceptual framework, the following hypotheses are proposed: 1) participation in the program

will increase perceived knowledge of mindfulness among program participants and 2) there will be a relationship between desire to practice mindfulness and intention to apply mindfulness in daily life.

For the research questions, the model also shows the relationships among the variables youth factors of state mindfulness, youth value of mindful living, and demographics. The dependent variable for the research questions is youth value of mindful living. The independent variables are youth factors of state mindfulness (awareness of mental events, awareness of physical sensations, and non-judgment of emotional experience) and demographics (gender, religiosity, prior experience with mindfulness). The direction of the arrows illustrates the relationship among variables in the conceptual model. Based on the literature review and conceptual framework, the following hypotheses are proposed: 1) there is a relationship between youth factors of state mindfulness and youth value of mindful living and 2) there is a relationship between demographics and youth value of mindful living.

Program Logic Model

The mindfulness program evaluation was a key component of this study. The logic model further describes how the model informed program development and implementation. Through measuring youth perceptions' of their experience with the program (rating of instructor and workshop) and the factors of youth state mindfulness (awareness of mental events, awareness of physical sensations, and perception of emotional experience), the researcher expected to see an increase in youth's understanding of mindfulness and high ratings in youth value of mindful living. Finally, the program should cause youth to resolve to practice mindfulness in the future and to desire to learn more about mindfulness. The program logic model is shown in Appendix A.

Conclusion

There is a need to understand how factors of mindfulness contribute to the development of mindful living principles in youth. Research has assessed these factors in clinical and school settings, but very few studies have assessed these factors in a non-formal educational context. Also, the literature review showed that several instruments exist to measure mindfulness on both a single factor and multi-factor scale. However, there is no instrument to measure state mindfulness during a mindfulness session program in a nonformal educational setting for youth in existing literature. The researcher adapted existing instruments and created new items as needed to address the study objectives. The existing instruments that measured factors of mindfulness served as a foundation for this study. Further studies are needed beyond this study to better understand whether or not non-formal educational settings like 4-H camp, are an effective method to teach mindfulness to youth.

Chapter 3

Methodology

Introduction

The present study had two major aims: 1) program development, delivery, and evaluation of the Mindfulness Moments: Today and 4-Life program at Pennsylvania and Ohio 4-H Camps and 2) examining factors affecting youth value of mindful living among youth ages 10-18. The program involved participation in a two-hour mindfulness workshop.

The study was approved as exempt research by Pennsylvania State University's Institutional Review Board. The approval letter is in Appendix B. Per Pennsylvania State University's Institutional Review Board policy, parents provided consent and youth provided assent to participate in the present study. The study utilized a non-experimental design. There was a pretest and posttest portion and a posttest only portion of the instrument. Both the evaluation instrument and the research instrument were administered simultaneously. The design was a simple one-group design. A descriptive-correlational research design was utilized to answer research questions.

This chapter will first describe the program and program evaluation. An overview of the program, program description, curriculum components, program objectives, assumptions and limitations of the program, purpose of the evaluation and evaluation questions, and the evaluation instrument will be discussed. Then, the chapter will describe the research portion of this study. The type of research, purpose and questions, study design (including population and instrumentation), variables, site selection, data collection procedures, and limitations will be discussed.

Part I: The Program Description and Program Evaluation

Overview of the Mindfulness Moments: Today and 4-Life Program

The Mindfulness Moments: Today and 4-Life Program was adapted from existing mindfulness programs by the researcher in 2019. The researcher learned that no mindfulness program curriculum for Pennsylvania 4-H programs existed (Stackhouse, personal communication, January 14, 2019). The state 4-H leader, state 4-H program manager, and the lead 4-H educator on the state Camping Team at the Pennsylvania 4-H program requested the adaption of the Mindfulness Moments: Today and 4-Life curriculum and aided in finding study sites. The Ohio 4-H State Camping Specialist also recruited study participants when additional participants were needed. The goal of this program was to help youth understand mindfulness and mindful living principles by providing them with tools to apply mindfulness in their daily lives. The mindfulness program helped youth better understand self-awareness, which is part of intrapersonal leadership development. The program was piloted at the Pennsylvania 4-H Junior Leadership Conference before teaching the program at the other 4-H camp sites in June and July 2019.

This program was developed to align with social emotional educational standards, which helped guide the program logic. Effective social emotional programs follow the acronym SAFE, which stands for 1) Sequenced activities that are led in a coordinated and connected way to skills, 2) Active forms of learning, 3) Focused on developing one or more social skills, and 4) Explicit about targeting specific skills (Durlak, et. al., 2011). Therefore, this program included 1) sequenced mindfulness activities, 2) youth mindfulness practices (rather than only having the opportunity to hear or read about the concept), 3) focus on developing both mindfulness knowledge and skills, and 4) being explicit about the definitions and applications of mindfulness

that youth should take away from the program. These principles have been utilized to assess programming in afterschool programs, showing their relevance for guiding this study's program development for mindfulness programming in a non-formal educational setting (Durlak & Weissberg, 2011). In addition to following the SAFE model, the researcher developed a logic model for the program. The program logic model (Appendix A) further describes the resources that were needed to inform the program, and program assumptions and limitations. The Wisconsin Extension Logic Model Template (Program Development and Evaluation, Wisconsin Extension, 2020) was used to create this program logic model.

Program Description

The program for the present study was a two-hour workshop where participants learned and applied mindfulness concepts. The program was synthesized from existing mindfulness programs, for both youth and adults, and revised to fit a 4-H camp setting. The curriculum is available from the author upon request.

The program began with the instructor discussing the concept of mindfulness with participants. Then, the instructor led youth through the mindfulness practices. 4-H member participants were able to set an intention for the day, practice guided breathing and meditation, practice movement, and practice awareness of senses. A review of session activities concluded the first hour of the workshop. At Pennsylvania 4-H Junior Leadership Conference and Camp Hervida, the instructor then immediately presented the second hour of the workshop. At Camp Kanasatake, the instructor led the second part of the workshop the next day at camp. The second part of the workshop was focused on mindfulness and leadership. The instructor discussed and defined the concept of compassion with youth. The instructor then led youth through a loving-kindness practice. Finally, the instructor led youth through a discussion focused on applying

mindfulness and compassion to be better leaders within 4-H and the broader community. At the end, the instructor led participants in setting two SMART (Specific, Measurable, Attainable, Relevant, and Timely) goals to practice mindfulness after the program. Specific components of the curriculum can be viewed in table 3-1.

Table 3-1: Components of The Mindfulness Moments: Today and 4-Life Curriculum.

| <i>Program Component</i> | <i>Program Component Description</i> |
|--|---|
| Define Mindfulness | Discuss with youth to define the concept of mindfulness |
| Setting an Intention | Guide youth to choose a word or phrase to guide their mindfulness practice for the day(s) |
| Mindful Breathing | Teach youth deep breathing techniques |
| Guided Imagery | Read youth a short story using calming imagery |
| Movement Practice | Lead youth through posture mindfulness practices |
| Everyday Mindfulness | Lead youth through a sensing mindfulness practice |
| Define Compassion | Discuss with youth to define the concept of compassion |
| Loving Kindness | Lead youth through a loving-kindness meditation script |
| Mindfulness & Compassion in leadership | Discuss with youth how what they learned today may present in their real lives (i.e. at home, school 4-H, in their communities, etc.) |
| SMART Goals | Work with youth to complete a worksheet to set goals for how they will apply mindfulness practices in the future |
| My Mindfulness Practice | Instruct youth to draw and describe how they plan to apply mindfulness in the future, using the provided worksheet |

Components of Curriculum

The activities that the participants completed included the two-hour Mindfulness Moments program adapted by the researcher, SMART goal and My Mindfulness Practice worksheets, and the pre and posttest instrument. The researcher drew from the Get Experience in Mindfulness 4-H Curriculum (Banks & Bercaw, 2018), Learning to BREATHE Curriculum (Broderick, 2013), Ohio State University Mindful Wellness Curriculum (Powers-Barker, Carter, & Worthington, 2018), and the 4-H Yoga for Kids program (Washburn & Copeland, 2014) activities to develop this curriculum. The author adapted the SMART goals activity from the Ohio State University Mindful Wellness Curriculum for adults and produced a youth version of the worksheet to guide study participants through the activity.

Program Objectives

The program was guided by the following objectives:

- Understand the concept of mindfulness.
- Apply mindfulness concepts by completing guided activities, such as mindful movement, deep breathing, and other meditation exercises.
- Analyze and reflect upon how they can apply mindfulness in their daily lives.
- Understand how the concepts of mindfulness and self-awareness relate to leadership concepts.
- Discuss how to apply and set SMART goals to apply mindfulness and leadership concepts at home (i.e. personal practice, through cultivating relationships, through 4-H club work, community work, etc.).

Program Assumptions and Limitation

There were assumptions and limitations that influenced this program's development, implementation, and evaluation. To view the program assumptions and limitations, see the logic model in Appendix A.

Purpose of the Program Evaluation and Evaluation Questions

The purpose of this program evaluation was to determine if youths' participation in the mindfulness program increased perceived knowledge of mindfulness. Moreover, the study aimed to determine whether or not youth intended to apply mindfulness practices learned in the program in the future and how youth desire to practice mindfulness related to youth intention to practice mindfulness.

The following questions guided the program evaluation:

E1: Does participation in the mindfulness program increase perceived knowledge of mindfulness?

E2: Does participation in the program indicate intention to apply mindfulness practices in daily life?

E3: How does desire to continue mindfulness practice relate to intention to practice mindfulness?

The evaluation instrument was comprised of 23 items. The pretest evaluation items included items 1-7 and the posttest evaluation items included items 17-32. The instrument can be viewed in its entirety in Appendix C (The evaluation and research instrument were combined into one pretest and posttest survey for youth participants to complete.). The following sections will further explain the subsections within the evaluation instrument.

Table 3-2: Summary of the evaluation instrument.

| <i>Construct</i> | <i>Variable Measured</i> | <i>Scale</i> | <i>Cronbach alpha</i> | <i>Total items</i> |
|--|--|---|--------------------------|--------------------|
| Perceived knowledge of mindfulness | Perceived knowledge of mindfulness | 5-point Likert scale from 1=Strongly disagree to 5=Strongly agree | .88 (pre), .87 (post) | 7 pre, 7 post |
| Intention to apply mindfulness practices in daily life | Intention to apply mindfulness practices in daily life | 3-point Likert scale, where 1=Definitely won't use, 2=Maybe will use, 3=Definitely will use | .83 | 5 |
| Desire to learn more about mindfulness | Desire to learn more about mindfulness | 5-point Likert scale from 1=Strongly disagree to 5=Strongly agree | .87 | 2 |

Perceived Knowledge of Mindfulness

This construct was reflected through items 1-7. Pretest and posttest survey knowledge items were developed based on program objectives and major elements of mindfulness from Kabat-Zin's (2012) definition. These items were used by the researcher to determine youths'

change in perceived knowledge of mindfulness. The researcher developed seven pre- and posttest perception of mindfulness knowledge items. The questions were measured on a 5-point Likert scale labeled from *1=Strongly disagree* to *5=Strongly agree*. Increase in ratings from pre to posttest indicated youth understanding of concepts. An example of items is shown in Table 3-3. The instrument can be viewed in its entirety in Appendix C.

Table 3-3: Examples of change in perceived knowledge items.

| <i>Item</i> |
|---|
| "I can define mindfulness." |
| "I know how mindfulness relates to leadership." |

Intention to Apply Mindfulness Practices in Daily Life

This construct is reflected through items 24-28. These items were developed by the researcher for a youth audience after reviewing Roeser's (2019) community mindfulness program evaluation instrument. The five items measure youth intent to apply mindfulness practices after the program. The items list the practices, and youth were instructed to rate how likely they were to use the concepts as a result of program participation. The items utilized a 3-point Likert scale labeled *1=Definitely won't use*, *2=Maybe will use*, and *3=Definitely won't use*. An example of items is shown in Table 3-4. The instrument can be viewed in its entirety in Appendix C.

Table 3-4: Examples of intention to apply items.

| <i>Item</i> |
|----------------------------|
| "Breath awareness" |
| "Loving-kindness practice" |

Desire to Learn More about Mindfulness

This construct is reflected through items 29-30. Items 29-30 were developed by the researcher to reflect youths' desire to continue to practice mindfulness. The researcher developed these items after consulting experts in survey methodology and mindfulness. The two items were

rated on a 5-point Likert scale labeled from *1=Strongly disagree* to *5=Strongly agree*. An example of items is shown in Table 3-5. The instrument can be viewed in its entirety in Appendix C.

Table 3-5: Examples of desire items.

| <i>Item</i> |
|--|
| “I want to learn more about mindfulness.” |
| “I want my friends to learn more about mindfulness.” |

Part II: The Research Study

Type of Research

A quantitative method was used for this study based on descriptive-correlational research design. The instrument helped to assess factors that affect value of mindful living for youth audiences. The research design helped the researcher to describe youth populations of this study with respect to the dependent variable (youth value of mindful living) and a set of predicted factors (demographic variables and factors of state mindfulness). This study adapted several existing instruments, and also included several new items that were added by the researcher. The existing instruments served as a foundation for this study.

Purpose and Research Questions

The purpose of this study was to investigate factors that affect youth value of mindful living. This study examined the relationship between youth value of mindful living and selected demographic variables (gender, religiosity, prior experience with mindfulness) and youth factors of state mindfulness (awareness of mental events, awareness of physical sensations, and non-judgment of emotional experience).

Two research questions guided the research study:

R4: What is the relationship between youth value of mindful living and non-judgment of emotional experience, awareness of physical sensations, and awareness of mental events?

R5: What are youth perceptions of youth value of mindful living differed based on gender, religiosity, and prior experience with mindfulness?

Research Design

Population

The study population was comprised of 4-H members from both Pennsylvania and Ohio 4-H camps. The study participants were 4-H members in Pennsylvania and Ohio who attended selected 4-H camp sites in summer 2019 and signed up for the Mindfulness Moments: Today and 4-Life program. Sites were recommended to the researcher by the Pennsylvania 4-H staff. An additional site with Ohio 4-H was recruited by the Ohio 4-H Camping Specialist and added by the researcher. Study participants were attendees for the following Pennsylvania and Ohio 4-H events in 2019: Pennsylvania 4-H Junior Leadership Conference in State College, Pennsylvania 4-H Camp Kaneshake, and Ohio 4-H Camp Herva. The program was piloted for the first time at the Pennsylvania 4-H Junior Leadership Conference in State College, Pennsylvania.

Instrumentation

The study instrument was designed using two previously-validated instruments, in addition to items adapted and developed by the researcher. The previously-validated instruments included the Five-Factor Mindfulness Questionnaire (FFMQ) and the State Mindfulness Scale (SMS). The Five Facet Mindfulness Questionnaire (FFMQ), had a Cronbach's alpha of .87 (Baer, Smith, Hopkins, Krietemeyer & Toney, 2006) and the State of Mindfulness Scale (SMS), which had a Cronbach's alpha of .92, (Tanay & Bernstein, 2013) were used to measure Awareness of Mental Events, Awareness of Physical Sensations, and Non-Judgment of

Emotional Experience constructs. The researcher adapted items from these scales to fit a youth audience, a programming context, and a 4-H camp context. Youth Value of Mindfulness construct questions were developed by the researcher after reviewing Niemec's (2012) definition of mindful living and the Mindfulness Moments: Today and 4-Life program curriculum. The researcher flipped the Non-Judgement of Emotional Experience scale when analyzing data. The researcher based the visual design of the survey based on existing studies. Christian and Dillman (2004) found that symbols and graphical language can impact survey design. Authors noted that double-banking questions can cause participants to ignore the lower line, so this method was not utilized in this study. In addition, Christian and Dillman (2004) found where special instructions were needed, better response rates and quality were observed when these were placed before the question. Therefore, in this study, different instructions were placed before each survey section. In addition, Messer, Edwards, and Dillman (2012) note that using images can help focus a respondent on the content of the study rather than on the source of the study itself and feel more connected to a survey. A review of previously conducted youth program evaluation instruments from Ohio 4-H and the UNESCO youth leadership program provided further support for incorporating related images into the survey.

The Pennsylvania 4-H state leader, five faculty members from Pennsylvania State University, one faculty member from The Ohio State University, an Extension Specialist from Ohio State University Extension, and a 4-H Extension Educator from Ohio State University Extension helped establish content and face validity for the instrument. The reliability coefficient for the instrument was calculated with the IBM SPSS 24 statistical analysis software package. The reliability coefficient for the construct "Awareness of Mental Events" was .91, for

“Awareness of Physical Sensations” was .89, for “Non-Judgment of Emotional Experience” was .92, and for “Youth Value of Mindful Living” was .93.

Each of the survey constructs will be now discussed in more detail. The summary of instruments used in this study is shown in Table 3-6. Both the evaluation and research instrument were combined and administered to the study population simultaneously. The whole instrument can be found in Appendix C.

Table 3-6: Summary of instruments used in the research study.

| <i>Instrument</i> | <i>Variable Measured</i> | <i>Scale</i> | <i>Cronbach alpha original / (from this study)</i> | <i>Total items (Items adapted for this research)</i> |
|--|--------------------------------------|---|--|--|
| Five Factor Mindfulness Questionnaire (FFMQ) | Non-judgment of emotional experience | 5-point Likert scale from 1=Strongly disagree to 5=Strongly agree | .87(.92) | 8(5) |
| State Mindfulness Scale (SMS) | Awareness of mental events | 5-point Likert scale from 1=Strongly disagree to 5=Strongly agree | .91-.96(.91) | 17(5) |
| State Mindfulness Scale (SMS) | Awareness of physical sensations | 5-point Likert scale from 1=Strongly disagree to 5=Strongly agree | .85-.89(.89) | 5(5) |
| Youth Value of Mindful Living | Youth value of mindful living | 5-point Likert scale from 1=Strongly disagree to 5=Strongly agree | (.93) | 5(5)* |

Note: *These items were developed by the researcher.

Awareness of Mental Events (from SMS)

This scale was developed by Tanay and Bernstein (2013) to measure a component of

state mindfulness in adults (State Mindfulness of the Mind). This scale was shorted and rephrased to by the researcher to make questions applicable to a youth audience. The original instrument had 23 items, and 17 items comprised the State Mindfulness of the Mind construct. The Cronbach's alpha for this sub-scale ranged between .91 and .96 (Tanay and Bernstein, 2013), and was measured .91 for the present study. Table 3-7 provides examples of original items and adapted items. The whole instrument can be found in Appendix C.

Table 3-7: State Mindfulness of the Mind and Awareness of Mental Events Item Comparisons Examples.

| <i>Original Item</i> | <i>Adapted Item</i> |
|---|--|
| "I noticed pleasant and unpleasant emotions." | "I noticed feelings I liked and did not like." |
| "I noticed pleasant and unpleasant thoughts." | "I noticed thoughts I liked and did not like." |

Awareness of Physical Sensations (from SMS)

This scale was developed by Tanay and Bernstein (2013) to measure a component of state mindfulness in adults (State Mindfulness of the Body). This scale was shorted and rephrased to by the researcher to make questions applicable to a youth audience. The original instrument had 23 items, and five items comprised the State Mindfulness of the Body construct. The Cronbach's alpha for this subscale ranged between .85 and .89 in previous studies (Tanay and Bernstein, 2013), and was .89 for the present study. Table 3-8 provides examples of original items and adapted items. The whole instrument can be found in Appendix C.

Table 3-8: State Mindfulness of the Body and Awareness of Physical Sensations Scales Comparison.

| <i>Original Item</i> | <i>Adapted Item</i> |
|---|--|
| "I noticed physical sensations come and go." | "I noticed feelings in my body come and go." |
| "I noticed some pleasant and unpleasant physical sensations." | "I noticed feelings I liked and feelings I did not like in my body." |

Non-Judgment of Emotional Experience (from FFMQ)

The Five Factor Mindfulness Questionnaire was developed by Baer, Smith, Hopkins,

Krietemeyer, and Toney (2006). The instrument was used to measure factors of trait mindfulness. The Cronbach's alpha for this scale was established at .87 by previous studies (Baer, Smith, Hopkins, Krietemeyer & Toney, 2006) and was established at .92 for the present study. Items were rephrased by the researcher as needed to fit the audience and context. The original instrument had eight items, and the present study used five items to measure this construct. Table 3-9 provides examples of original items and adapted items. The whole instrument can be found in Appendix C. The researcher flipped this scale when analyzing data, as a higher value indicated higher levels of state mindfulness for the other constructs.

Table 3-9: Non-Judgment and Non-Judgment of Emotional Experience Scales Item Comparisons Examples.

| <i>Original Item</i> | <i>Adapted Item</i> |
|---|---|
| "I make judgements about whether my thoughts are good or bad." | "I judged whether my thoughts were good or bad." |
| "I think some of my emotions are bad or inappropriate and I shouldn't feel them." | "I thought some of my feelings were bad and shouldn't be feeling them." |

Youth Value of Mindful Living (developed by the researcher)

The Youth Value of Mindful Living scale was developed by the researcher after reviewing Niemec's (2012) definition of mindful living and the Mindfulness Moments: Today and 4-Life program curriculum. The scale was also reviewed by professors and experts in the areas of mindfulness, youth development, and leadership, which helped establish content and face validity for the instrument. The scale is comprised of 5 items, and the Cronbach's alpha was measured at .93. Examples of items are provided in Table 3-10.

Table 3-10: Youth Value of Mindful Living scale item examples.

| <i>Item Example</i> |
|--|
| "I think it is important to pay attention to my thoughts." |
| "I think mindfulness can make the world a better place." |

Demographics

In addition to these items, nine demographic questions were included to assess geographic location, gender, age, years in 4-H, whether or not youth view themselves as religious, prior experience with mindfulness, and social support. These items can be viewed in the instrument in Appendix C.

Variables

Dependent Variable

The dependent variable examined in this research was youth value of mindful living. The youth value of mindful living variable was calculated as a mean of the composite score of the youth value of mindful living items with the five items using a 5-point Likert scale.

Independent Variables

The four independent variables in this research were measures three factors of state of mindfulness namely, awareness of mental events, awareness of physical sensations, non-judgment of emotional experience, and selected demographics. The awareness of mental events variable was computed as a mean of the awareness of mental events scale with the five items based on a 5-point Likert-type scale (from 1 = strongly disagree to 5 = strongly agree). This variable was measured from program participants after completing the Mindfulness Moments: Today and for Life program. The awareness of physical sensations variable was computed as a mean of the awareness of physical sensations scale with the five items based on a 5-point Likert-type scale, which was rated from 1 = strongly disagree to 5=strongly agree. Data for this variable was collected from program participants after completing the Mindfulness Moments: Today and for Life program. The non-judgment of emotional experience variable was computed as a mean of the non-judgment of emotional experience score after it was flipped by the researcher. Data

from this variable was collected from program participants after completing the Mindfulness Moments: Today and for Life program. A 5-point Likert-type scale (from 1 = strongly disagree to 5 = strongly agree) was used to rate non-judgment of emotional experience.

There were multiple independent demographic variables. Youth were asked if they viewed themselves as a leader. The youth view of themselves as a leader variable was treated as categorical data, and answers were recorded as 1=Always, 2=Sometimes, 3=Never. Youth religiosity was considered an categorical variable, where 1=Yes and 2=No. Whether or not youth had attended a mindfulness training before was recorded as a categorical variable, where 1=Yes and 2=No. Length of time in the 4-H program was recorded as an ordinal variable, where 1=This is my first year, 2=2 years, 3=3 years, and 4=More than 4 years. Gender was also treated as categorical data, where 1=Male, 2=Female, and 3=Other. Age was treated as ordinal data, and divided into categories, where 1=<12, 2=12, 3=13, 4=14, and 5=15+. Youth location was treated as categorical data, where 1=I live on a farm, 2=I live in a small town/the country, 3=I live in a suburb, and 4=I live in a city. Youth were provided a question where they could check one of more of the following to indicate whom they feel supported by (social support): Family, Friends, Church, Adults at afterschool programs, and Other. Each social support answer was treated as its own categorical variable, and data was recorded as 1=Yes and 2=No. Youth were provided a question where they could check one of more of the following to indicate their extracurricular involvements: Church, Afterschool programs, Volunteering, and Other. Each extracurricular involvement answer was treated as its own categorical variable, and data was recorded as 1=Yes and 2=No. Only gender, religiosity, and prior experience with mindfulness were analyzed with youth value of mindful living to address research question 5.

Site Selection and Recruitment

The researcher contacted Pennsylvania 4-H program to identify camps to serve as study sites. The researcher contacted the Ohio 4-H Camping Specialist to recruit another site. Three Pennsylvania 4-H campsites agreed to take part in the study: Camp Brule, 4-H Camp Kanesatake, and Northwinds 4-H Camp. Camp Brule is located in Forksville, Pennsylvania, 4-H Camp Kanesatake is located in Spruce Creek, Pennsylvania, and Northwinds 4-H Camp is located in Ulysses, Pennsylvania. However, only 4-H youth at Camp Kanesatake participated in the present study due to lack of sign ups at Camp Brule and scheduling conflicts at Northwinds 4-H Camp. Camp Hervida in Washington County Ohio participated in the study. 4-H youth ages 10-18 at participating in the camps and who signed up for the optional program were study participants. The research instrument and the program were first piloted at the Pennsylvania 4-H Junior State Leadership Conference for Junior 4-H members.

Data Collection Procedures

The camp recruitment letter (see Appendix D) was used to inform camp directors about the present study. The recruitment message and the study consent form (see Appendix E) for parents were sent out with the 4-H youth 4-H camp registration packets or by the 4-H staff site coordinator. Before program delivery, the 4-H camp directors worked with the researcher to obtain parent permission for youth participants. Parents completed and signed a paper assent form. The 4-H camp directors provided the signed assent forms to the researcher. The day of the study, the researcher explained the study and informed youth that their participation was voluntary. After being informed about the research study, youth completed and signed paper assent forms (see Appendix F). An adult witness observed the assent process and also signed the assent forms. Youth were told participation was completely voluntary. In the event parents or 4-

H youth did not agree to participate in the study, the 4-H educators provided an alternative activity. In some cases, youth participated in the program but did not complete the study survey. After the assent process was complete, youth completed the pre-test portion of the survey. All items were distributed in one survey. Youth completed items 1-16 before the program and items 17-54 after the program. In Extension programs, retrospective surveys have shown to have more complete data responses due to participants' better understanding of questions due to already learning the content before attempting the questionnaire (Raidle et. al., 2004). Therefore, the majority of questions were retrospective to ensure more complete data was collected from youth. Data was collected with a paper and pencil questionnaire (see Appendix C). In the back of the room, the researcher provided a box for subjects to return surveys to minimize loss of confidentiality. Different colors of paper were utilized for the pre and posttest to provide clarity for study participants.

4-H youth who participated in the mindfulness program at Pennsylvania and Ohio 4-H Camps and the Pennsylvania 4-H Junior Leadership Conference were study participants. Therefore, this study utilized a convenience sample, as only youth who choose to attend the 4-H camp at selected sites and choose to participate in the program had the opportunity to be study participants. There were 72 4-H youth who completed the program. For the pilot study at Pennsylvania 4-H Junior Leadership Conference Junior on June 21, 2019, 14 youth both completed the program and participated in the study by completing the pilot study survey. A total of 48 youth completed the program at Camp Kanasatake on June 24-25, 2019, and 43 youth completed the program and the survey. Eleven 4-H members received the program at Camp Hervida on July 21, 2019, and eight of them completed both the program and survey.

Limitations of the Research Design

There were various limitations to this study's non-experimental research design. Firstly, because the study used a convenience sample, these findings cannot be generalized to all 4-H youth or all youth across the state of Pennsylvania and Ohio because only youth attending the Pennsylvania and Ohio 4-H camps and who elected to sign up for the mindfulness program were included in the study. However, the research may provide valuable preliminary data to the Pennsylvania 4-H program in determining whether or not they wish to expand their mindfulness programming for 4-H youth across Pennsylvania. Other states may want to begin to explore this line of inquiry as well.

In addition to these concerns, there were identified threats to internal and external validity to this study, and the researcher worked to address them. To address history threats, the researcher discussed with the Pennsylvania 4-H program leader to determine no other mindfulness programming was being provided by 4-H to youth, pre-test and post-test questions were asked, and youth were asked on the survey whether or not they have attended mindfulness programming before. One participant's data from one of the camps was not used because the individual participated in the pilot at the Pennsylvania 4-H Junior Leadership Conference. To address instrumentation, the researcher gave subjects at all sites the same instrument in the same paper format. To address the effects of maturation, a program session approach was chosen rather than a multi-week program over time. To address testing, the majority of the instrument was a post-test only. To address expectancy, the researcher did not share that she developed the program being evaluated in the present study with participants. To address external validity, this study will not generalize results to all 4-H youth, all youth in the U.S., or all youth in Pennsylvania and Ohio. However, results can still be valuable to guide future researchers and

practitioners investigating mindfulness programming in 4-H and other non-formal educational settings.

The non-experimental design is limiting in nature. Firstly, the researcher recognized that because youth chose to be involved in this study, this may have impacted study results of satisfaction with the workshop due to pre-existing buy-in (Sears & Kraus, 2009). This also could have been influenced by the sites' attitude toward the study; all sites included in the study chose to be involved because the 4-H site coordinator involved volunteered to participate and thought the program could provide valuable skills to youth. There was no randomization of sampling because all 4-H camps were not required to be part of this study. There were also no control groups for this study. Future studies may want to choose a stratified sample and randomly select counties or camps throughout their states to be involved in the study, and non-selected groups could serve as control groups. This would allow the researcher to be able to generalize findings.

Conclusion

In conclusion, Chapter 3 described the program and program evaluation. An overview of the program, program description, curriculum components, program objectives, assumptions and limitations of the program, purpose of the evaluation and evaluation questions, and the evaluation instrument were discussed. Then, the chapter described the research study portion of this project. The type of research, purpose and questions, study design (including population and instrumentation), variables, site selection, data collection procedures, and limitations were also discussed. Now, the data analysis process and results will be described.

Chapter 4

Results

The first purpose of the study was to conduct a program evaluation for the youth mindfulness program Mindfulness Moments: Today and 4-Life. The second purpose of the study was to investigate factors affecting youth value of mindful living. Chapter 4 begins with a description of data analysis procedures. Then, descriptive statistics for demographics and for key variables including youth value of mindful living, awareness of mental events, awareness of physical sensations, and non-judgment of emotional experiences are provided. Finally, the findings for each of the evaluation and research questions that guided the present study are presented.

Data Analysis

Data were collected via paper and pencil surveys provided to subjects by the researcher at the beginning and conclusion of the Mindfulness Moments: Today and 4-Life program. Collected data were transferred into the Statistical Product and Service Solution (SPSS®) software version 24 for statistical analysis. The non-judgment of emotional experience scale was reversed in the software after being entered, as lower scoring responses indicated more emotional awareness.

The study population was presented using descriptive statistics. Frequencies were used for categorical variables, such as gender, youth location, and whether or not youth view themselves as a leader. Means and standard deviations were used for non-categorical variables, such as age and years in 4-H. Independent construct variables (awareness of mental events, awareness of physical sensations, non-judgment of emotional experience) and the dependent variable, youth value of mindful living, were treated as interval data.

A paired samples-t-test was used to determine whether participation in the mindfulness program increased perceived knowledge of mindfulness. T-tests were run to compare individual pre-test (items 1-7) and post-test items (items 17-23) individual and to compare the pre-test and post-test overall mean scores of independent variables. The test compared pre and post mean scores for items individually and for the pre-test and post-test independent overall mean scores.

Descriptive statistics were used to determine whether or not program participants intend to apply mindfulness practices in daily life. Mean scores for items related to intention to apply mindfulness practices (items 24-28) were examined to determine whether or not participants intended to use mindfulness after the program. The mean score for items overall was analyzed as an independent construct variable as well and treated as interval data.

Pearson's correlation test was used to determine whether desire to continue mindfulness practice related to intention to practice mindfulness. Items for desire to practice mindfulness (29-30) and items for desire to continue practicing mindfulness (items 24-28) were combined into independent construct variables and analyzed as interval data. Davis' (1971) conventions were utilized to determine the magnitude of the relationships between variables. These conventions are presented in table 4-1.

Table 4-1: Describing the magnitude of correlations with Davis' (1971) conventions.

| <i>Magnitude of Correlation Coefficient</i> | <i>Description</i> |
|---|-------------------------|
| 1.00 | Perfect association |
| 0.70 or higher | Very strong association |
| 0.50 to 0.69 | Substantial association |
| 0.30 to 0.49 | Moderate association |
| 0.10 to 0.29 | Low association |
| 0.01 to 0.09 | Negligible association |

Note: Adapted from Davis, J.A. (1971) "Elementary survey analysis" Englewood, NJ: Prentice-Hall.

Pearson's correlation test was also used to examine the relationship between youth value of mindful living and non-judgement of emotional experience, awareness of physical sensations,

and awareness of mental events. Davis' (1971) conventions were utilized to determine the magnitude of the relationships between variables, which were presented in table 4-1.

T-tests and chi square tests were used to examine how youth perceptions of youth value of mindful living differed based on selected demographic variables. The t-test examined the relationship between youth value of mindful living and selected demographic variables, which included youth religiosity, prior experience with mindfulness, and gender. A chi square test was also used to determine the difference between youth value of mindful living and various demographic variables, among them religiosity, prior experience with mindfulness, and gender. Only descriptive statistics were run for other demographic variables.

Descriptive Statistics for Key Variables

Demographic Characteristics of Study Participants

The study population included n=65 4-H members who both participated in the Mindfulness Moments: Today and 4-Life program and completed the evaluation and research instruments. The majority of student participants were in 4-H more than 4 years (64.6%). The majority of study participants were 12 years old (30.8%). When asked if they viewed themselves as a leader always, sometimes, or never, the majority of youth indicated sometimes (75.4%). Most of them consider themselves religious (68.8%). Few study participants had attended a mindfulness workshop before (9.2%). Most study participants were female (55.4%). The majority of study participants live on a farm (52.3%). The majority of study participants indicated that they feel they have social support from their family (93.8%) and friends (75.4%). However, the majority of 4-H members did not feel supported by their church (56.9%), adults in youth organizations (58.5%), or in other ways (88%). The majority of study participants are involved in their church (69%), afterschool programs (75%), and volunteering (57%). Few

participants indicated they were involved in additional community involvements (23%).

Table 4-2: Summary of demographic variables.

| <i>Item</i> | <i>n</i> | <i>%</i> |
|-------------------------------|----------|----------|
| Years in 4-H | | |
| This is my first year | 6 | 9.2 |
| 2 years | 5 | 7.7 |
| 3 years | 12 | 18.5 |
| More than 4 years | 42 | 64.6 |
| Total | 65 | 100.0 |
| Age | | |
| <12 | 6 | 9.2 |
| 12 | 20 | 30.8 |
| 13 | 14 | 21.5 |
| 14 | 14 | 21.5 |
| 15+ | 11 | 16.9 |
| Total | 65 | 100.0 |
| View themselves as leaders | | |
| Always | 14 | 21. |
| Sometimes | 49 | 75.4 |
| Never | 2 | 3.1 |
| Total | 65 | 100.0 |
| Religiosity | | |
| Yes | 44 | 68.8 |
| No | 20 | 31.3 |
| Total | 64 | 100.0 |
| Previous mindfulness workshop | | |
| Yes | 6 | 9.2 |
| No | 59 | 90.8 |
| Total | 65 | 100.0 |
| Gender | | |
| Male | 28 | 43.1 |
| Female | 36 | 55.4 |
| Other | 1 | 1.5 |
| Total | 65 | 100.0 |
| Location | | |
| Farm | 34 | 52.3 |
| Small town/country | 25 | 38.5 |
| Suburb | 6 | 9.2 |
| City | 0 | 0 |

| | | | |
|------------------------|-------|----|-------|
| | Total | 65 | 100 |
| Social support-family | | | |
| | Yes | 61 | 93.8 |
| | No | 4 | 6.2 |
| | Total | 65 | 100.0 |
| Social support-friends | | | |
| | Yes | 49 | 75.4 |
| | No | 16 | 24.6 |
| | Total | 65 | 100.0 |
| Social support-church | | | |
| | Yes | 28 | 43.1 |
| | No | 37 | 56.9 |
| | Total | 65 | 100.0 |

Awareness of Mental Events

Awareness of Mental Events during the Mindfulness Moments: Today and 4-Life program was measured using the 5-item Awareness of Mental Events Scale. This scale was adapted from Tanay and Bernstein's (2013) State Mindfulness of the Mind subscale, which is part of the State Mindfulness Scale. Respondents were asked to report their experiences with Awareness of Mental Events using a 5-point Likert scale (1 = Strongly disagree to 5 = Strongly agree). The mean score was 3.74 ($SD = .13$), and the score had a high negative skew of -1.21.

Awareness of Physical Sensations

Awareness of Physical Sensations was measured using the 5-item Awareness of Mental Events Scale Awareness of Physical Sensations Scale. This scale was adapted from the State Mindfulness of the Body subscale of Tanay and Bernstein's (2013) State Mindfulness Scale. Respondents were asked to report their experiences with Awareness of Physical Sensations using a 5-point Likert scale (1 = Strongly disagree to 5 = Strongly agree). The mean score was 3.77 ($SD = .12$). The score had a high negative skew of -1.22.

Non-Judgment of Emotional Experience

Participants' Non-Judgment of Emotional Experience was measured using the 5-item

Non-Judgment of Emotional Experience Scale. Items from this scale were adapted using items from the Non-Judgment subscale of The Five Factor Mindfulness Questionnaire (Baer, et. al., 2006). Participants reported responses for this scale using a 5-point Likert scale (1 = Strongly disagree to 5 = Strongly agree). The researcher flipped this scale before conducting data analysis. The mean score was 2.84 ($SD = 1.05$). The score had a low positive skew of 0.34.

Youth Value of Mindful Living

Data for Youth Value of Mindful Living was measured using the Youth Value of Mindful Living Scale, which was developed by the researcher. This scale was comprised of 5-items. Items were measured on a 5-point Likert scale (1 = Strongly disagree to 5 = Strongly agree). The mean score was 2.84 ($SD = .12$). The score had a high negative skew of -1.53.

Findings for Question 1

Evaluation question 1 was: Does participation in the mindfulness program increase perceived knowledge of mindfulness?

The paired samples t-test indicated that on average, youth increased perceived knowledge of mindfulness for each item when both pre-test and post-test mean scores were examined. The t-test also showed that the overall mean score for all post-test items increased when compared to the pre-test item scores. Results of the paired samples t-tests, for item-by-item comparisons and overall pre-test and post-test comparisons, showed that there is a significant relationship between pre-test and post-test scores, with all p 's < 0.01 . Means and standard deviations for pre and post-test perceived knowledge of mindfulness items are shown in table 4-3. Paired samples t-test results for perceived knowledge of mindfulness are shown in table 4-4. The results suggest that participation in the mindfulness program increased perceived knowledge of mindfulness for youth participants. For pre-test overall mean values, skewness (-.830) and kurtosis (.041) values

and analysis of the histogram (Figure 4-1) and normal Q-Q plot (Figure 4-2) supported the normality assumption. For post-test overall mean values, the skewness (-.934) values and the kurtosis (.435) values and visual analysis of the Q-Q plot (Figure 4-3) supported the normality assumption. However, visual analysis of the histogram (Figure 4-4) indicates that the data may has a negative skew.

The results suggest that participation in the mindfulness program increased perceived knowledge of mindfulness for youth participants.

Table 4-3: Means and standard deviations for pre and post-test perceived knowledge of mindfulness items.

| <i>Item</i> | <i>Pre-Test</i> | | <i>Post-Test</i> | |
|---|-----------------|-----------|------------------|-----------|
| | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> |
| I can define mindfulness. | 2.98 | 1.15 | 4.31 | .732 |
| I can name the 3 main components of mindfulness. | 2.14 | .90 | 4.15 | .83 |
| I could do a mindfulness practice on my own. | 2.50 | 1.21 | 4.20 | .91 |
| I can set a SMART (Specific, Measurable, Achievable, Relevant, Timely) goal related to mindfulness. | 2.92 | 1.19 | 4.25 | .87 |
| I know how mindfulness relates to leadership. | 2.97 | 1.21 | 4.08 | .84 |
| I think it's important to practice mindful living. | 3.53 | 1.12 | 3.97 | 1.00 |
| I can explain why it is important to practice mindful living. | 2.77 | 1.07 | 3.89 | 1.06 |
| Overall mean | 2.87 | .82 | 4.13 | .69 |

Note: *Results are significant at the 0.01 level of significance.

Table 4-4: Paired samples t-test results for perceived knowledge of mindfulness.

| <i>Item</i> | <i>M Difference</i> | <i>SD</i> | <i>df</i> | <i>Sig, (2-tailed)</i> |
|---|---------------------|-----------|-----------|------------------------|
| I can define mindfulness. | -1.328 | 1.22 | 63 | .000 |
| I can name the 3 main components of mindfulness. | -2.015 | 1.19 | 64 | .000 |
| I could do a mindfulness practice on my own. | -1.703 | 1.48 | 63 | .000 |
| I can set a SMART (Specific, Measurable, Achievable, Relevant, Timely) goal related to mindfulness. | -1.323 | 1.38 | 64 | .000 |
| I know how mindfulness relates to leadership. | -1.108 | 1.32 | 64 | .000 |
| I think it's important to practice mindful living. | -.446 | 1.16 | 64 | .003 |
| I can explain why it is important to practice mindful living. | -1.123 | 1.36 | 64 | .000 |
| Overall pre-test post-test difference | -1.256 | .97 | 62 | .000 |

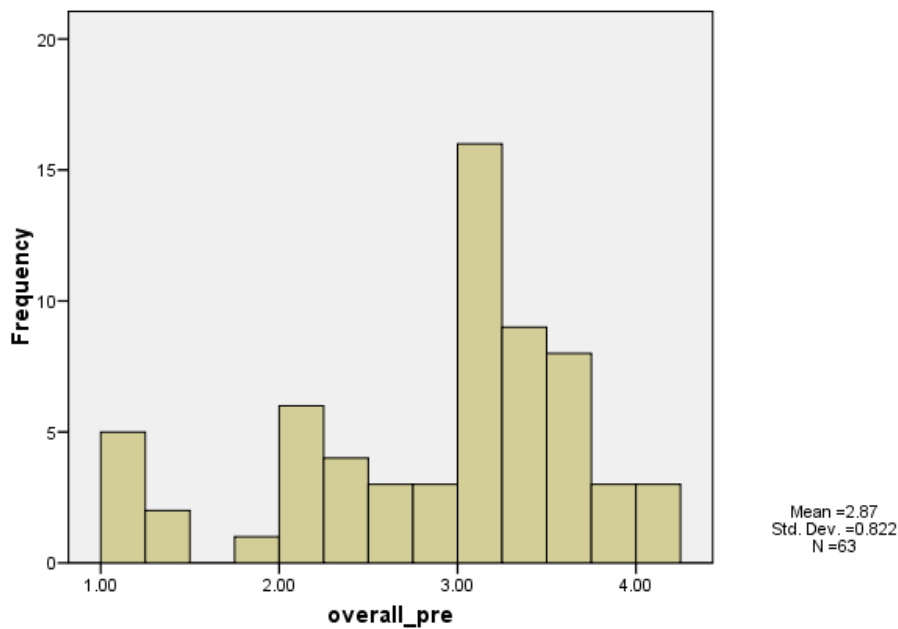


Figure 4-1: Pre-test score overall histogram.

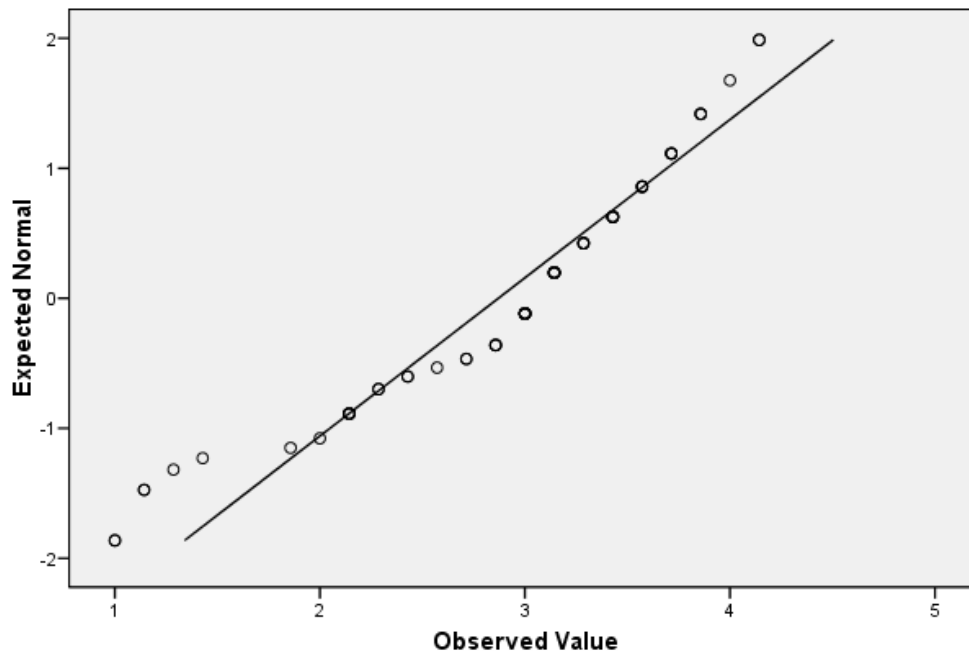


Figure 4-2: Pre-test score overall normal Q-Q plot.

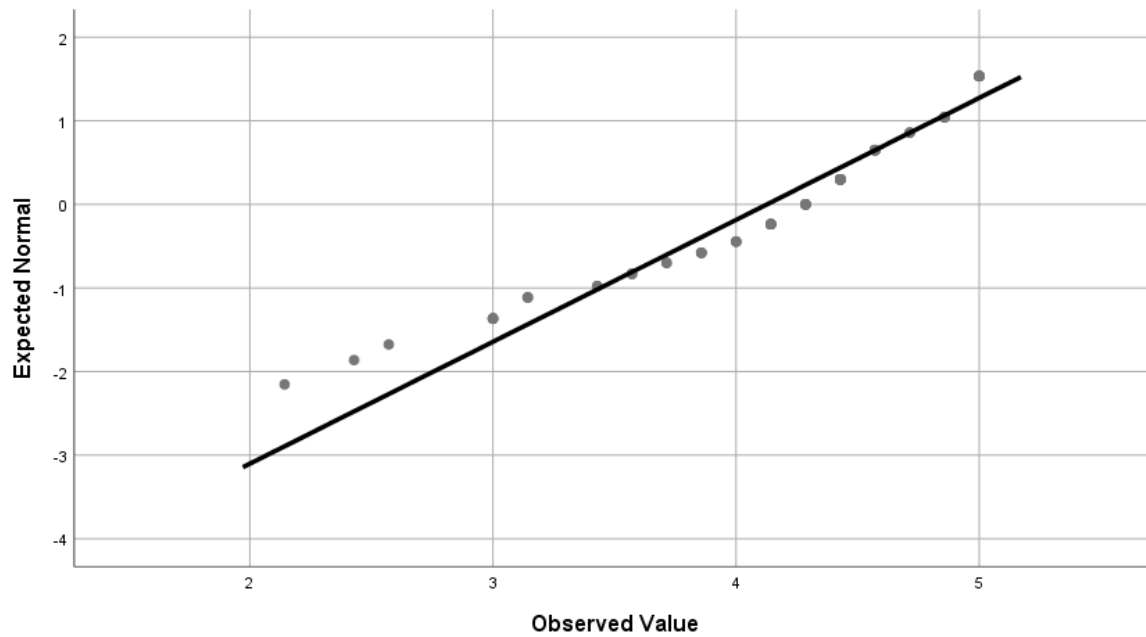


Figure 4-3: Post-test score overall normal Q-Q plot.

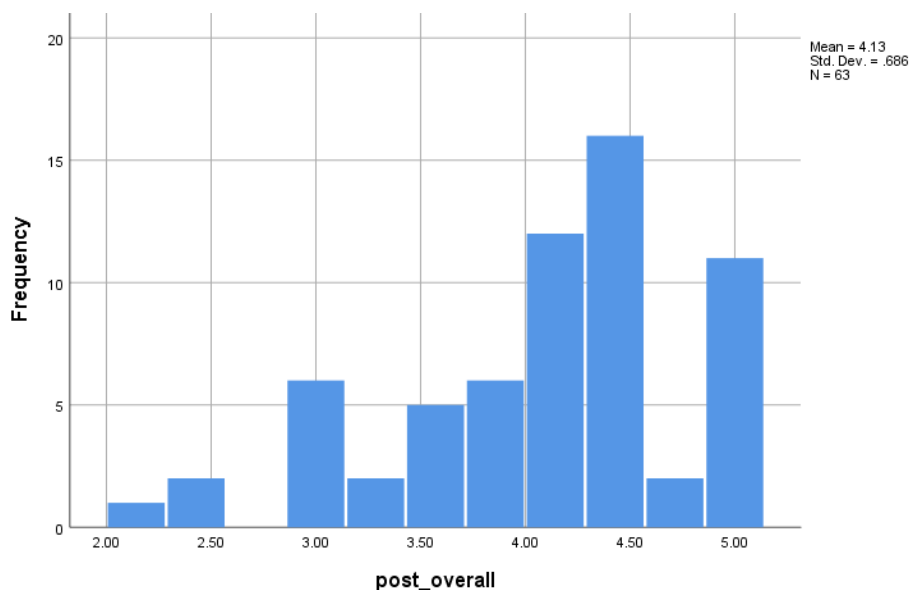


Figure 4-4: Post-test overall score histogram.

Findings for Question 2

Evaluation question 2 was: Do program participants intend to apply mindfulness practices in daily life?

The results of descriptive data analysis showed that, on average, participants intend to maybe use or definitely use what they learned in the Mindfulness Moments: Today and 4-Life program. Mean scores for items related to intention to apply mindfulness practices items and intention to apply mindfulness practices overall ($M = 2.30$, $SD = .52$) are shown in Table 4-5.

The skewness and kurtosis values for all items and the overall intention to practice mindfulness value were between 1.5 and -1.5, which supports the normality assumption. Visual analysis of the histogram (Figure 4-5) and normal Q-Q plot (Figure 4-6) for intention to apply mindfulness overall also supported the normality assumption.

The results suggest that participation in the program affected participants' intention to apply mindfulness practices after the program.

Table 4-5. Descriptive statistics for participants' intention to apply mindfulness practices.

| <i>Item</i> | <i>M</i> | <i>SD</i> |
|--------------------------|----------|-----------|
| Breath awareness | 2.52 | .62 |
| Posture practice | 2.02 | .70 |
| Loving-kindness practice | 2.26 | .67 |
| Awareness of senses | 2.43 | .71 |
| Setting SMART goals | 2.28 | .70 |
| Overall | 2.30 | .52 |

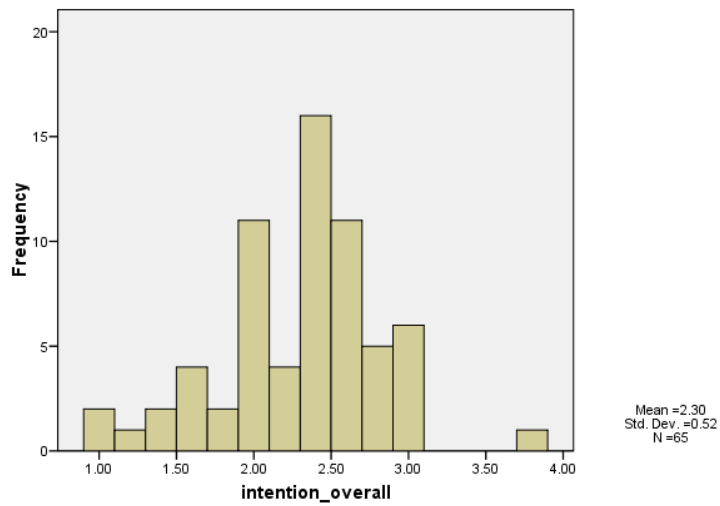


Figure 4-5: Intention to apply mindfulness practice overall score histogram.

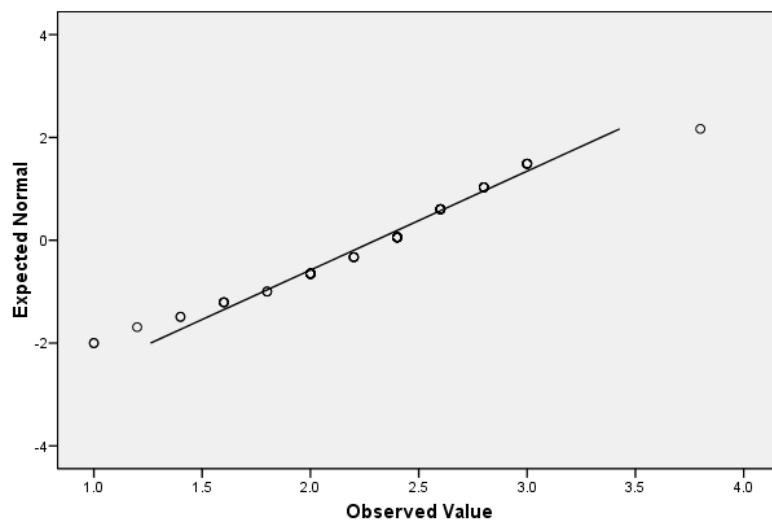


Figure 4-6: Intention to apply mindfulness practice overall score normal Q-Q plot.

Findings for Question 3

Evaluation question 3: How does desire to continue mindfulness practice relate to intention to practice mindfulness?

The results of the Person correlation coefficient test showed a substantial association and significant relationship between desire to continue mindfulness practice and intention to practice mindfulness ($r = .62, p = 0.01$). Davis' (1971) conventions were utilized to examine the magnitude of the relationship between variables. Table 4-6 shows the relationship between variables.

Table 4-6: Bivariate correlation among desire to continue mindfulness practice and intention to practice mindfulness.

| <i>Measure</i> | Desire to continue mindfulness practice | Intention to practice mindfulness |
|---|--|--------------------------------------|
| Intention to practice mindfulness | .615* (n=65) | - |
| Desire to continue mindfulness practice | | .615* (n=65) |

Note: *Correlation is significant at the 0.01 level (2-tailed).

Findings for Question 4

Research question 4: What is the relationship between youth value of mindful living and non-judgement of emotional experience, awareness of physical sensations, and awareness of mental events?

The results of the Person correlation coefficient test showed a very strong significant association between youth value of mindful living and awareness of mental events ($r = .787, p = 0.01$) and awareness of physical sensations ($r = .787, p = 0.01$). A moderate significant association was identified between youth value of mindful living and nonjudgement of emotional experience, ($r = .422, p = 0.01$). Davis' (1971) conventions were utilized to examine the

magnitude of the relationship between variables. Table 4-7 shows the relationship between variables.

Table 4-7: Bivariate correlation among youth value of mindful living and factors of state mindfulness.

| <i>Measure</i> | Awareness of mental events | Awareness of physical sensations | Nonjudgment of emotional experience | Youth Value of Mindful Living |
|---|-------------------------------|--|---|-------------------------------------|
| Awareness of mental events | - | - | - | .787* |
| Awareness of physical sensations | - | - | - | .807* |
| Nonjudgment of emotional experience | - | - | - | .423* |
| Youth Value of Mindful Living | .787* | .807* | .423* | - |

Note: *Correlation is significant at the 0.01 level (2-tailed).

Findings for Question 5

Research question 5: What are youth perceptions of youth value of mindful living differed based on gender, religiosity, and prior experience with mindfulness?

Descriptive statistical analysis was conducted for each variable of interest. Independent samples t-tests and chi square analysis were conducted to examine the difference between participants' overall value of mindful living and categorical variables, namely religiosity and gender.

The descriptive statistics for youth value of mindful living in relation to youth religiosity are shown in table 4-8. The descriptive statistics for youth value of mindful living in relation to their prior experience with mindfulness is shown in table 4-9. Table 4-10 shows descriptive statistics for youth value of mindful living by gender.

Table 4-8: Descriptive statistics for youth value of mindful living by religiosity.

| <i>Variable</i> | <i>N</i> | <i>M</i> | <i>SD</i> | <i>STD. Error</i> |
|-----------------|----------|----------|-----------|-------------------|
| Religious | | | | |
| Yes | 43 | 4.26 | .67 | .10 |
| No | 19 | 3.86 | 1.23 | .28 |

Table 4-9: Descriptive statistics for youth value of mindful living by prior experience with mindfulness.

| <i>Variable</i> | <i>N</i> | <i>M</i> | <i>SD</i> | <i>STD. Error</i> |
|-----------------------------------|----------|----------|-----------|-------------------|
| Prior experience with mindfulness | | | | |
| Yes | 6 | 4.50 | .28 | .11 |
| No | 56 | 4.11 | .92 | .12 |

Table 4-10: Descriptive statistics for youth value of mindful living by gender.

| <i>Variable</i> | <i>N</i> | <i>M</i> | <i>SD</i> | <i>STD. Error</i> |
|-----------------|----------|----------|-----------|-------------------|
| Gender | | | | |
| Male | 26 | 3.75 | .87 | .17 |
| Female | 36 | 4.42 | .80 | .13 |
| Other | * | | | |

Note: There are no valid cases for you value of mindful living when gender = other (3.00) Statistics could not be computed for this level.

An independent samples t-test was run for each of the selected demographics variables to show their relationship between the variable and value of mindful living. Visual analysis for Q-Q plots for all of the variables showed supported the normality assumption. See table 4-11.

Table 4-11: Independent Samples t-Test – Mean scores of youth value of mindful living on religiosity, mindful living, prior experience with mindfulness, and gender.

| | <i>Levene's test for equality of variance</i> | | <i>t</i> | <i>df</i> | <i>Sig. (2-tailed)</i> |
|---|---|-------------|----------|-----------|------------------------|
| | <i>F</i> | <i>Sig.</i> | | | |
| Overall youth value of mindful living and religiosity | 5.91 | .018 | 1.64 | 60 | .11 |
| Overall youth value of mindful living and prior experience with mindfulness | 4.82 | .032 | 1.02 | 61 | .31 |

| | | | | | |
|--|------|------|-------|----|------|
| Overall youth value of mindful living and gender | .510 | .478 | -3.00 | 61 | .004 |
|--|------|------|-------|----|------|

Levene's test shows that the assumptions of the equal variance t-test are not reasonable for mindful living and religiosity. There is not a significant relationship between youth value of mindful living and religiosity ($t(60) = 1.64, p = .11$). Levene's test shows that the assumptions of the equal variance t-test are not reasonable for youth value of mindful living and prior experience with mindfulness. There is not a significant relationship between youth value of mindful living and prior experience with mindfulness ($t(61) = 1.02, p = .31$). The mean difference was .39. Levene's test shows that the assumptions of the equal variance t-test are reasonable for youth value of mindful living and gender. Based on the independent samples t-test, there may be a significant relationship between youth value of mindful living and gender ($p < .01$). The average mean difference was .64.

Chi square tests were also conducted to determine the significance of the relationship between youth value of mindful living and the following variables: religion, gender and prior experience with mindfulness. The chi square test indicated that there was a significant relationship between youth value of mindful living and gender ($\chi^2(11, n = 63) = 23.975; p = .013$). However, the chi square test showed that there was not a significant relationship between youth value of mindful living and religion ($\chi^2(11, n = 63) = 13.710; p = .249$) and prior experience with mindfulness ($\chi^2(11, n = 63) = 15.124; p = .177$). Table 4-13 provides the results of chi square analysis.

Table 4-12: Chi-square analysis on association between youth value of mindful living and selected demographic variables: religion, gender, and experience.

| Demographic Factors | <i>n</i> | χ^2 | <i>df</i> | <i>P</i> * |
|---------------------|----------|----------|-----------|------------|
| Religion | 62 | 13.710 | 11 | .249 |
| Gender | 63 | 23.975 | 11 | .013 |
| Experience | 63 | 15.124 | 11 | .177 |

Summary

The chapter began with describing the data analysis methods. Then demographic statistics for key variables were presented. Finally, findings for the evaluation and research questions were presented. A summary of key findings includes the following:

- The average study participant was a 4+ year 4-H member who was a 12-year-old female. They sometimes view themselves as a leader, consider themselves religious, are new to mindfulness, and live on a farm. They feel supported by family and friends but not by the church or adults who lead youth organizations. They are involved in church, afterschool programs, and volunteering, but not other additional activities.
- On average, youth participants were at least somewhat aware of mental events ($M = 3.74$, $SD = .97$) and physical sensations ($M = 3.77$, $SD = .92$) and somewhat judgmental of their emotions ($M = 2.84$, $SD = 1.05$) during the workshop.
- On average, youth highly value mindful living ($M = 4.15$, $SD = .90$).
- Perceived knowledge of mindfulness increased for study participants after the program.
- On average, participants plan to maybe use or definitely use the mindfulness practices after the program.
- There is a significant relationship between intention to apply mindfulness practices and desire to learn more about mindfulness.

- There is a significant relationship between youth value of mindful living and gender.
There is not a significant relationship between youth value of mindful living and religiosity and prior experience with mindfulness.
- There is a significant relationship between youth value of mindful living and each factor of state mindfulness. There is a very strong correlation between youth value of mindful living and both awareness of mental events and awareness of physical sensations.
Chapter 5 will include a detailed discussion of findings.

Chapter 5

Discussion

Study Overview

The aim of chapter 5 is to present the study purpose, evaluation and research questions, an overview of methods, and a summary of findings and recommendations. Then, conclusions and implications from findings will be discussed.

This study included both program evaluation and research related to the Mindfulness Moments: Today and 4-Life program. There were three sites where the program was conducted, and 72 youth participated in the program. A total of n=65 youth both completed the program and filled out the evaluation and research instrument. 4-H youth ages 10-18 who attended Pennsylvania and Ohio 4-H programs at study sites and completed the program were study participants. The introduction will provide a more detailed overview of the study. Then, findings, conclusions, and recommendations of the present study will be presented.

The aim of this study was to assess youth experience of a mindfulness program taught at Pennsylvania and Ohio 4-H camps. This study evaluated the mindfulness program that was delivered by the researcher in Pennsylvania and Ohio. Moreover, this study explored factors that affect youth value of mindful living, among youth ages 10-18.

The study was guided by three evaluation questions and two research questions:

E1: Does participation in the mindfulness program increase perceived knowledge of mindfulness?

E2: Do program participants intend to apply mindfulness practices in daily life?

E3: How does desire to continue mindfulness practice relate to intention to practice mindfulness?

R4: What is the relationship between youth value of mindful living and non-judgement of emotional experience, awareness of physical sensations, and awareness of mental events?

R5: What are youth perceptions of youth value of mindful living differed based on gender, religiosity, and prior experience with mindfulness?

Site Selection

There were three sites selected for program delivery in Pennsylvania and Ohio. The Pennsylvania 4-H Junior Leadership conference was selected as the program pilot site. 4-H Camp Kanesatake in Spruce Creek, Pennsylvania and Camp Hervida in Washington County Ohio were the other study sites.

Program Participants

4-H youth ages 10-18 at participating sites and who signed up for the optional program were study participants. The average study participant was a 4+ year 4-H member who was a 12-year-old female. The average study participant sometimes viewed themselves as a leader, considered themselves religious, was new to mindfulness, and lived on a farm. They felt supported by family and friends, but not by the church or adults who lead youth organizations. They were involved in church, afterschool programs, and volunteering, but not additional extracurricular activities.

Conclusions, Discussion, and Recommendations

Through a program evaluation and quantitative research instrument, this study sought to evaluate the effectiveness of the Mindfulness Moments: Today and 4-Life program and sought to determine whether or not there was a relationship between youth value of mindful living and selected variables. The present study involved both program evaluation and research questions. Mindfulness education for youth in non-formal educational environments is an emerging area of

study (Greenberg & Harris, 2012), and youth participants' voices will be important for practice and research as this field moves forward. Each of the evaluation questions aimed to demonstrate knowledge and youth experience of the program. Each of the research questions aimed to show how mindful living relates to various variables.

Evaluation Question 1: Does participation in the mindfulness program increase perceived knowledge of mindfulness?

Conclusions

On average, participants increased in knowledge gained overall. This increase was observed for individual items and in an overall mean comparison. On average, participants increased their knowledge for each item measuring perceived knowledge of mindfulness as well. The mean score of items for overall perceived knowledge of mindfulness was 2.87 ($SD = .82$) before the workshop and 4.13 ($SD = .69$) after the workshop. The average mean difference between the pre-test and post-test overall index was 1.26 ($SD = .96$), and the results were significant ($p < 0.001$).

Discussion and Recommendations

The results suggest that mindfulness programming is effective in increasing youth knowledge of mindfulness. This aligns with previous research. Many scholars have found improvements in mental health and coping skills for youth mindfulness program participants in school settings (Biegel & Brown, 2010; Franco Justo et. al., 2011; Joyce et. al. 2010; Napoli, Krech, & Holley, 2005; Mendelson et. al. 2010; Metz et. al. 2013; Potek, 2012; Schonert-Reichel & Lawlor, 2010; White 2012). In concert, youth mindfulness programs in community settings have aided youth participants by reducing stress (Bluth, Roberson, and Gaylord, 2015),

increasing their ability to pay attention (Bluth, Roberson, and Gaylord, 2015), and reducing occurrence of negative behaviors due to stress (Berger & Stein, 2009).

The results are not generalizable beyond Pennsylvania and Ohio 4-H members because a convenience sample was utilized from youth who elected to participate in selected sites. This study used a convenience sample, a non-probability sampling method that uses study participants based on being easily available (Patton, 2002). This approach was essential due to working with the 4-H program, as the subjects elected to participate and needed parental approval. Future program implementations and evaluations in different settings and with larger, more diverse groups of youth should be conducted to validate findings from this study.

Mindfulness is an important skill for youth to have to manage their stress, and past research has shown mindfulness programming can reduce effects of stress in youth (Sibinga et al., 2011). Few existing studies examined mindfulness programming in non-formal youth settings (Frauman, 2011), and few mindfulness studies examined programming in a camp setting (Le, 2014; Liehr and Diaz, 2010; Nyaga, & Bialcheski, 2011). Only one of these studies examined the effects of a 4-H mindfulness program (Le, 2014). Le (2014) reported that mindfulness programming in a 4-H setting was effective in helping youth learn skills to manage stress, and the results of the present study support these findings.

Due to lack of literature, more research is needed on the effects of mindfulness programs in non-formal educational settings, especially in 4-H camp settings. More youth mindfulness programs should be conducted and evaluated, and existing programs should develop program evaluations and report the findings to help scholars and practitioners advance youth mindfulness and stress management program development, implementation, and evaluation. Greenberg and Harris (2011) also noted the importance of “developing a more rigorous scientific base” for

youth mindfulness programs through examining study design, developmental appropriateness, clarity of description of the programs or activities, and frequency and intensity of program and activities.

Evaluation Question 2: Do program participants intend to apply mindfulness practices in daily life?

Conclusions

On average, participants indicated that they intend to maybe use or definitely will use the mindfulness practices they learned from the program. Their intention to apply what they learned suggests they may apply concepts into their daily lives as a result of participation in the program. The overall average was 2.30 ($SD = .52$) when measured on a 3-point Likert-type scale where 1 = Definitely won't use, 2 = Maybe will use, and 3 = Definitely will use.

Discussion and Recommendations

Few published studies on the effectiveness of a mindfulness program in non-formal 4-H and camp settings exist (Le, 2014; Liehr and Diaz, 2010; Nyaga, & Bialcheski, 2011). Mindfulness studies in formal education settings confirm that mindfulness programs are effective in reducing stress and anxiety among youth participants (Bluth, Roberson, and Gaylord, 2015; Broderick & Metz, 2009; Franco Justo et. al., 2011; Mendelson et. al. 2010; Metz et. al. 2009; Metz et. al. 2013; Napoli, Krech, & Holley, 2005; Potek, 2012; Schonert-Reichel & Lawlor, 2010; White, 2012). Studies of youth mindfulness programs in formal educational settings also reported improved mental health and behavior for program participants (Broderick & Metz, 2009; Flook et al, 2010; Mendelson, et. al., 2010; Noggle, Steiner, Minami & Khalsa, 2012; Schonert-Rechl & Lawlor, 2010), which may indicate better ability for youth to manage stress as well. Most of these studies used a pretest-posttest design, which were distributed immediately

before the program began and immediately after the program ended. However, they lacked a follow-up after several weeks, which would help to better determine whether or not there were lasting effects of the program.

There are rarely opportunities to follow up with children an extended period of time after they have completed a mindfulness program. However, one study conducted a follow up assessment 7 weeks and 14 weeks after the mindfulness program was delivered to youth participants (Potek, 2012). Potek (2012) found that anxiety symptoms and stress were reduced among youth participants. In order to better understand the changes in behaviors as a result of mindfulness programs like the Mindfulness Moments: Today and 4-Life program, more follow-up studies should be conducted to help better determine the long-term impacts of this program. Broderick and Metz (2009) and Mendelson and colleagues (2010) also noted that long-term follow up studies could help determine if participants are retaining and applying mindfulness practices to manage stress.

Evaluation Question 3: How does desire to continue mindfulness practice relate to intention to practice mindfulness?

Conclusions

There is a substantial significant relationship between intention to apply mindfulness practices and desire to learn more about mindfulness ($r = .615, p = 0.01$). Davis' (1971) conventions were utilized to examine the magnitude of the relationship between variables. Youth who intend to apply mindfulness practices after the program are more likely to desire to learn more about mindfulness.

Discussion and Recommendations

The research indicated that on average, youth intend to apply what they have learned about mindfulness ($M = 2.30$ on a 3-point Likert-scale). The majority of participants want to learn more about mindfulness. However, youth's intention to apply what they learned may have been impacted by the youth being excited about mindfulness due to having recently experienced the program. Longitudinal studies are needed to determine whether or not youth value of mindful living will continue after short-term exposure to the program. Having the same or higher value of mindfulness after significant time has passed after program completion would further validate the instrument and to help demonstrate program effectiveness.

The literature review did not reveal any program evaluations that measured how desire to practice mindfulness related to intention to practice mindfulness in the future. However, one existing study looked at whether or not youth applied what they had learned. Potek (2012) conducted a follow up after a mindfulness program for youth. Potek (2012) found that anxiety symptoms and stress were reduced among youth participants after examining 7-week and 14-week follow ups. However, other examined studies only completed pre and post tests before the program and right at the conclusion of the program. Again, more research is needed to better understand how youth are applying what they learned from the program.

More Program Development, Implementation, and Evaluation Discussion and Recommendations for Extension

Please see Appendix G for additional recommendations that were shared with the Pennsylvania 4-H program. The letter was sent to Dr. Joshua Rice, Assistant Director, 4-H Youth Development Programs.

Research Question 4: What is the relationship between youth value of mindful living and non-judgement of emotional experience, awareness of physical sensations, and awareness of mental events?

Conclusions

There were significant relationships between youth value of mindful living and each of the state factors of mindfulness, which include awareness of physical sensations, awareness of mental events, and non-judgement of emotional experience. The results of the Pearson correlation coefficient test showed a very strong significant association between youth value of mindful living and awareness of mental events ($r = .787, p = 0.01$). The Pearson coefficient also showed a very strong significant relationship between youth value of mindful living and awareness of physical sensations ($r = .807, p = 0.01$). Between youth value of mindful living and nonjudgement of emotional experience, there was a moderate significant association ($r = .423, p = 0.01$). Davis' (1971) conventions were utilized to examine the magnitude of the relationship between variables.

Discussion and Recommendations

Cox, Ullrich-French, and French's (2016) and Tanay and Bernstein's (2013) studies examined state level factors of mindfulness. Cox, Ullrich-French, and French (2016) adapted the State Mindfulness Measure (SMS) to apply to physical activity rather than a mindfulness program, and examined how general mindfulness, state body surveillance, state intrinsic motivation, and reasons for exercise related to state level mindfulness. However, this study added assessment of non-judgement of emotional events into program participants' conceptualization of state mindfulness. More studies should apply the state mindfulness model to youth populations to determine its effectiveness for understanding state mindfulness of youth.

More research should be done to further establish the state level factors of mindfulness with the non-judgment of emotional events component in the model. The SMS with the non-judgement of emotional events addition should be applied with mindfulness programing research with adults to help further confirm the model for state mindfulness research. The SMS with the nonjudgment component and question adaptation for youth should be applied to other mindfulness research projects with children, especially during youth mindfulness programs, to help further confirm usefulness of the model for conducting state mindfulness research in youth settings. Finally, the present study instrument should be applied in various program settings further confirm its effectiveness in various non-formal educational settings.

Research Question 5: What are youth perceptions of youth value of mindful living differed based on gender, religiosity, and prior experience?

Conclusions

There is not a significant relationship between youth value of mindful living and religiosity ($p > .05$) and prior experience with mindfulness ($p > .05$). There is a significant relationship between youth value of mindful living and gender ($p < .05$).

Gender Discussion and Recommendations

Previous research found that coping strategies differ based on gender (Ólafsson & Jóhannsdóttir, 2004; Woodhead, 2013). In addition, gender has also been shown to affect social and emotional education programs in formal education settings (Gould, Dariotis, Mendelson & Greenberg, 2012). The results of this study supported several studies that found a relationship between gender and mindfulness. For example, Dhandra and Park (2018) found that men tended to be more mindful and lenient when making ethical decisions than women. Snowden and colleagues (2015) found a significant relationship between mindfulness and gender. Zamir,

Gewirtz, and Zhang (2017). Gender was a primary predictor of trait mindfulness (Lyvers, Makin, Toms, Thorberg, & Samios, 2014). Abujaradeh and colleagues (2020) also found gender to have a significant relationship between age and mindfulness in their study with an adolescent population. Another study with youth found that mindfulness coloring activities more effectively prevent test anxiety in youth females than youth males (Carsley & Heath, 2018). Another study found that females were more engaged and more likely to feel less stressed after a mindfulness intervention (Bluth, Roberson, & Girdler, 2017). This study's findings support these findings from the literature.

Religiosity Discussion and Recommendations

Religiosity and spirituality and its relationship to mindfulness have been previous areas of interest for scholars. Several existing studies examined religiosity and mindfulness among adult populations. Mindfulness Based Stress Reduction (MBSR) practices and spirituality have been found to help improve depressive symptoms in adults (Greeson, et. al., 2015). Another study of undergraduate social work students at a university found that mindfulness reduces anxiety, while religious strain can increase it (Ying, 2009). According to Lo and colleagues, mindful parenting is associated with positive religious coping skills (2018). Youth development scholars also examined the relationship between religiosity and mindfulness. Spirituality and mindfulness have been found to help lower depression levels among youth (Greeson et. al., 2015). Another study of high school students found that students who were higher in mindfulness abilities were also higher in religious values (Heaven & Ciarrochi, 2010). The studies cited here for both adults and youth may refute this study's findings. However, these studies examined mindfulness abilities rather than value of mindful living. No existing studies have examined the youth value of mindful living construct's association with other variables, as

the Youth Value of Mindful Living instrument construct was developed by the researcher.

Mindfulness ability may or may not be associated with youth value of mindful living. Future studies should examine the relationship between mindfulness ability and value of mindful living. Young and Shipley (2004) support this study's findings; youth claimed they were not religious, but still claimed they practices mindfulness. Although the study did not indicate youth value mindfulness, a personal practice of mindfulness may suggest that youth value it. In concert, Bodhi (2011) and Powers-Barker, Carter, and Worthington (2018) emphasize that mindfulness is not a religion, but rather a way of managing stress. However, additional research comparing the relationship between youth value of mindful living and religiosity would help scholars better understand youth value of mindful living.

Prior Experience with Mindfulness Discussion and Recommendations

No existing studies have examined how youth prior experience with mindfulness and meditation and relates to selected variables. However, existing studies were conducted with adult populations. For example, Droit-Volet and Heros (2017) examined how time judgement was influenced by previous mindfulness meditation experience, and found that this did not affect time judgement for participants. However, the authors found that subjects who were more mindful did have a more drawn out experience of time that those who had lower levels of mindfulness. Thompson and Waltz (2007) confirmed that experienced adult meditators report a heightened experience of mindfulness during meditation, are more observant, and are usually less reactive to experiences.

No existing studies examined how prior experience with mindfulness with youth impacts youth value of mindful living. Further studies should be conducted to better understand how

prior experience with mindfulness impacts youth value of mindful living, and other variables of interest.

Conclusion & Implications

Mindfulness programs for youth have been heavily studied in youth formal educational settings, but are just beginning to be implemented in non-formal educational settings. In the present study, attempts were made to assess Pennsylvania and Ohio 4-H youth experience of a mindfulness program adapted from existing programs. The program was adapted, delivered, and evaluated in June and July 2019. The study also aimed to understand the relationship between youth value of mindful living and state factors of mindfulness. The study also determined the relationship between youth value of mindful living and selected demographic variables, among them gender, religiosity, and prior experience with mindfulness.

Study participants were 4-H members who attended selected Pennsylvania and Ohio 4-H camps. The study's review of literature identified a gap for studies assessing the effectiveness of mindfulness programming in both non-formal educational and Extension educational settings. Results of the study suggest that youth gained knowledge of mindfulness, intend to apply what they learned, and desire to learn more about mindfulness due to program participation.

Descriptive study results showed that the typical Pennsylvania 4-H youth attending camp is a 4+ year 4-H member who was a 12-year-old female. They sometimes view themselves as a leader, consider themselves religious, are new to mindfulness, and live on a farm. They feel supported by family and friends but not by the church or adults who lead youth organizations. They are involved in church, afterschool programs, and volunteering, but not other additional activities. Program practitioners should keep demographics of the population in mind when implementing future mindfulness programming with youth, and make adjustments as needed.

The paired samples t-test for the evaluation knowledge of mindfulness questions indicated that participation in the program increases perceived knowledge of mindfulness. The overall mean increased for each item to assess knowledge of mindfulness. The program should be further replicated and evaluated to validate this finding.

The results of descriptive data analysis revealed that most participants intend to maybe use or definitely will use each of the four mindfulness practices taught in the program. This suggests that the program inspires youth to apply mindfulness practices. However, longitudinal studies need to be conducted to validate this finding and determine if youth apply what they learned after the workshop.

The Pearson correlation coefficient test showed a substantial significant correlation between desire to practice mindfulness and intention to practice mindfulness in the future. This suggests that program participants who desired to learn more about mindfulness are more likely to practice mindfulness in the future. Mindfulness program practitioners should first focus on helping youth learn the benefits of mindfulness and fostering enthusiasm about mindfulness before suggesting youth implement the practices on their own.

There was no significant relationship found between prior experience with mindfulness and youth value of mindful living. Also, there was no significant relationships found between religiosity and youth value of mindful living. The results suggest that youth at any skill level of mindfulness can see the value of mindfulness in their lives. This also supports the idea that mindfulness is not a religion, and that people do not need to practice a religion to apply mindfulness practices (Powers-Barker, Carter, & Worthington, 2018).

Results of the study suggest that the more aware youth are of the present moment (measured by factors of state mindfulness, namely awareness of mental events, awareness of

physical sensations, and non-judgment of emotional experience), the more they value mindful living. Results also suggest females are more likely to value mindful living than boys are, as the Pearson correlation coefficient test showed there was a significant relationship between gender and youth value of mindful living. These results suggest that:

- Youth development practitioners should provide opportunities to practice mindfulness before assessing how they value mindfulness, as those with more awareness tend to value it more.
- Special attention should be given to boys when teaching mindfulness programming. More research should be conducted to determine the best ways to teach mindfulness and the value of mindfulness to boys ages 10-18.
- Non-judgment of emotional experience was the lowest scoring category for state mindfulness. Future mindfulness programming for youth should make this a focus area for programming.

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Appendix A

Program Logic Model

Program: Mindfulness Moments: Today and 4-Life Logic Model
 Situation:

| Inputs | Outputs | | Outcomes -- Impact | | |
|---|--|--|--|--|---|
| | Activities | Participation | Short | Medium | Long |
| <ul style="list-style-type: none"> Instructor time developing, delivering and evaluating the program Travel time to sites 4-H volunteers to act as workshop assistants and witnesses (if using the project for research) Curriculum Cost of yoga mats | <ul style="list-style-type: none"> Completing the 2-hour Mindfulness Moments program Completing the SMART goal worksheet Completing the My Mindfulness Practice worksheet Completing the pre and posttest evaluation | <ul style="list-style-type: none"> 4-H Youth at the Pennsylvania 4-H State Leadership Conference, 4-H Camp Kanasatake in Pennsylvania, and 4-H Camp Hervida in Ohio | <p>By the end of the workshop, youth will be able to...</p> <ul style="list-style-type: none"> Understand the concept of mindfulness Apply mindfulness concepts by completing guided activities, such as yoga, deep breathing, and other meditation exercise Analyze and reflect upon how they can apply mindfulness in their daily lives. Understand how the concepts of mindfulness and self-awareness relate to leadership concepts. Set SMART goals to apply mindfulness and leadership concepts at home (i.e. personal practice, through cultivating relationships, through 4-H club work, community work, etc.) | <ul style="list-style-type: none"> Youth will be able to complete their mindfulness SMART goals on their own. Youth will seek out more opportunities to learn about mindfulness. | <ul style="list-style-type: none"> Youth apply mindfulness concepts within their 4-H work and into their daily lives. Youth are better equipped to manage stress and maintain their mental health. Youth are better prepared to be engaged citizens by being more aware of events occurring within their homes, schools, and larger communities. |
| Assumptions <ol style="list-style-type: none"> A mindfulness program may have similar benefits for youth in a non-formal educational setting as in clinical and formal educational settings. Youth will be able to practice mindfulness after the program using the SMART goals they set. Introducing youth to the concept of mindfulness will cause them to want to learn more about mindfulness beyond the program. | | | External Factors <p>Parents allowing participation in the program, competing workshops that youth may be able to sign up for at the camps and conferences, communication between the researcher and the 4-H program</p> | | |

Rev. 7/09

Appendix B

IRB Approval Letter



PennState

Office for Research Protections

Vice President for Research
The Pennsylvania State University
205 The 330 Building
University Park, PA 16802

814-865-1775
Fax: 814-865-8699
orp@psu.edu
research.psu.edu/orp

EXEMPTION DETERMINATION

Date: March 14, 2019

From: Kimberly Petrosky,

To: Mariah Stollar

| | |
|-------------------------|---|
| Type of Submission: | Initial Study |
| Title of Study: | Assessing Adolescents' Experience of a Mindfulness Program at Penn State Extension 4-H Camps |
| Principal Investigator: | Mariah Stollar |
| Study ID: | STUDY00011935 |
| Submission ID: | STUDY00011935 |
| Funding: | Not Applicable |
| Documents Approved: | <ul style="list-style-type: none"> • HRP-591 - Protocol for Human Subject Research Stollar-mindfulness (1).pdf (3.13), Category: IRB Protocol • Study Instrument (0.01), Category: Data Collection Instrument |

The Office for Research Protections determined that the proposed activity, as described in the above-referenced submission, does not require formal IRB review because the research met the criteria for exempt research according to the policies of this institution and the provisions of applicable federal regulations.

Continuing Progress Reports are **not** required for exempt research. Record of this research determined to be exempt will be maintained for five years from the date of this notification. If your research will continue beyond five years, please contact the Office for Research Protections closer to the determination end date.

Changes to exempt research only need to be submitted to the Office for Research Protections in limited circumstances described in the below-referenced Investigator Manual. If changes are being considered and there are questions about whether IRB review is needed, please contact the Office for Research Protections.

Penn State researchers are required to follow the requirements listed in the Investigator Manual ([HRP-103](#)), which can be found by navigating to the IRB Library within CATS IRB (<http://irb.psu.edu>).

This correspondence should be maintained with your records.

We would like to know how the IRB Program can better serve you.
Please fill out our survey; it should take about a minute: <https://www.research.psu.edu/irb/feedback>.

Appendix C

Study Instrument

Mindfulness Moments: Today and 4-Life

Pre-Survey

Directions: These are questions related to what you know about mindfulness. Please share your level of agreement for each statement by checking (✓) the ONE (1) box that best applies to you.

| | Strongly Disagree | Disagree | Neither Disagree or Agree | Agree | Strongly Agree |
|--|-------------------|----------|---------------------------|-------|----------------|
| Items | 1 | 2 | 3 | 4 | 5 |
| 1. I can define mindfulness. | | | | | |
| 2. I can name the 3 main components of mindfulness. | | | | | |
| 3. I could do a mindfulness practice on my own. | | | | | |
| 4. I can set a SMART (Specific, Measurable, Achievable, Relevant, Timely) goal related to mindfulness. | | | | | |
| 5. I know how mindfulness relates to leadership. | | | | | |
| 6. I think it's important to practice mindful living. | | | | | |
| 7. I can explain why it is important to practice mindful living. | | | | | |



Directions: Please check (✓) ONE (1) answer for each of the following questions.



8. Do you view yourself as a leader?

- ☐ Always
- ☐ Sometimes
- ☐ Never



9. Do you consider yourself religious?

- ☐ Yes, always
- ☐ Most of the time
- ☐ Some of the time
- ☐ No, never



10. Have you attended a mindfulness workshop or class before?

- ☐ Yes
- ☐ No



11. How long have you been in 4-H?

- ☐ This is my first year.
- ☐ 2 years
- ☐ 3 years
- ☐ More than 4 years



12. What is your gender?

- ☐ Male
- ☐ Female
- ☐ Other



13. How old are you? _____

- ☐ <12
- ☐ 12
- ☐ 13
- ☐ 14
- ☐ 15+



14. Which statement best describes where you live?

- ☐ I live on a farm.
- ☐ I live in a small town/the country.
- ☐ I live in a suburb.
- ☐ I live in a city.

Directions: Please check (✓) ALL answers that apply to you for the following questions.

15. Who do you feel supported by?

- ☐ Family
- ☐ Friends
- ☐ Church
- ☐ Adults at afterschool programs (ex. Sports, choir, band, etc.)
- ☐ Other (if you have a different answer, please write on the line →) _____

16. Which of the following are you involved in?

- ☐ Church
- ☐ Afterschool programs
- ☐ Volunteering
- ☐ Other (if you have a different answer, please write on the line →) _____



**You will complete the rest of the survey
after the workshop.**

Please set your survey off to the side.

Post-Survey

Directions: These are questions related to what you know about mindfulness. Please share your level of agreement for each statement by checking (✓) the ONE (1) box that best applies to you.

| | Strongly Disagree | Disagree | Neither Disagree or Agree | Agree | Strongly Agree |
|---|-------------------|----------|---------------------------|-------|----------------|
| Items | 1 | 2 | 3 | 4 | 5 |
| 17. I can define mindfulness. | | | | | |
| 18. I can name the 3 main components of mindfulness. | | | | | |
| 19. I could do a mindfulness practice on my own. | | | | | |
| 20. I can set a SMART (Specific, Measurable, Achievable, Relevant, Timely) goal related to mindfulness. | | | | | |
| 21. I know how mindfulness relates to leadership. | | | | | |
| 22. I think it's important to practice mindful living. | | | | | |
| 23. I can explain why it is important to practice mindful living. | | | | | |



Directions: Please share how likely you are to use each mindfulness practice in your daily life from 1 "Probably won't use" to 3 "Definitely will use." Please check (✓) the ONE (1) box that best applies to you for each question.

| | Definitely won't use | Maybe will use | Definitely will use |
|--|----------------------|----------------|---------------------|
| Items | 1 | 2 | 3 |
| 24. Breath awareness | | | |
| 25. Posture practice | | | |
| 26. Loving-kindness practice | | | |
| 27. Awareness of senses | | | |
| 28. Setting SMART (Specific, Measurable, Achievable, Relevant, Timely) goals | | | |



Directions: These are questions related to what you experienced in the program today. Please share your level of agreement for each statement by checking (✓) the ONE (1) box that best applies to you.

| | Strongly Disagree | Disagree | Neither Disagree or Agree | Agree | Strongly Agree |
|---|-------------------|----------|---------------------------|-------|----------------|
| Items | 1 | 2 | 3 | 4 | 5 |
| 29. I want to learn more about mindfulness. | | | | | |
| 30. I want my friends to learn about mindfulness. | | | | | |
| 31. I liked how the teacher taught mindfulness. | | | | | |
| 32. Overall, I liked this workshop. | | | | | |

Directions: These are questions related to how you experienced the program today and how you value mindfulness. Please share your level of agreement for each statement by checking (✓) the ONE (1) box that best applies to you.

| | Strongly Disagree ⊖ | Disagree | Neither Disagree or Agree | Agree | Strongly Agree ⊕ |
|---|------------------------|----------|---------------------------|-------|---------------------|
| Items | 1 | 2 | 3 | 4 | 5 |
| Awareness of Mental Events | | | | | |
| 33. I noticed feelings I liked and did not like. | | | | | |
| 34. I noticed thoughts I liked and did not like. | | | | | |
| 35. I was aware of what was going on in my mind. | | | | | |
| 36. I felt closely connected to the present moment. | | | | | |
| 37. It was interesting to see the patterns of my thinking. | | | | | |
| Awareness of Physical Sensations | | | | | |
| 38. I noticed feelings in my body come and go. | | | | | |
| 39. I noticed some feelings I liked and feelings I did not like in my body. | | | | | |
| 40. I noticed things in my surroundings (for example, heat, coolness, the wind on my face). | | | | | |
| 41. I felt connected to my body. | | | | | |
| 42. I changed my body posture and paid attention to the physical process of moving. | | | | | |



Directions: These are questions related to how you experienced the program today and how you value mindfulness. Please share your level of agreement for each statement by checking (✓) the ONE (1) box that best applies to you.

| | Strongly Disagree | Disagree | Neither Disagree or Agree | Agree | Strongly Agree |
|--|-------------------|----------|---------------------------|-------|----------------|
| Items | 1 | 2 | 3 | 4 | 5 |
| Non-judgment of Emotional Experience | | | | | |
| 43. I told myself I shouldn't feel the way I'm feeling. | | | | | |
| 44. I thought some of my thoughts were bad and I shouldn't be thinking that way. | | | | | |
| 45. I judged whether my thoughts were good or bad. | | | | | |
| 46. I told myself I shouldn't be thinking the way I'm thinking. | | | | | |
| 47. I thought some of my feelings were bad and shouldn't be feeling them. | | | | | |
| Youth Value of Mindful Living | | | | | |
| 48. I think it is important to pay attention to my thoughts. | | | | | |
| 49. I think it is important to pay attention to my emotions. | | | | | |
| 50. I think it is important to pay attention to my body. | | | | | |
| 51. I think it is important to use mindfulness practices. | | | | | |
| 52. I think mindfulness can make the world a better place. | | | | | |

The End: Thank you for completing the survey!



Appendix D

Camp Recruitment Letter

Dear Penn State 4-H Extension Educators,

My name is Mariah Stollar, and I am a graduate research assistant studying Agricultural and Extension Education at Penn State. For my master's thesis, I am developing a youth curriculum on intrapersonal leadership, with a focus mindfulness, for youth ages 10-18. Through my personal research and by communicating with Penn State 4-H administration, I have learned there is a desire for and need to develop this curriculum.

Mindfulness, or the ability to experience the present moment, is a trending topic of study. Much research reflects the benefits mindfulness can provide adults. Studies are now exploring mindfulness benefits for youth. For example, mindful youth tend to more positively view their academic abilities and abilities to achieve personal goals. Mindfulness school programs have also shown to help youth increase their abilities to pay attention, participate in class, control themselves, and respect others, which could also be reflected in non-formal settings like 4-H. Mindfulness can aid in coping with challenges and enhances general well-being. In addition, studies have shown a correlation between mindfulness practice and decreased symptoms of depression and anxiety, which affect about 1 in 5 of American children today.

There are some 4-H mindfulness and yoga resources out there. The University of California has even developed a 4-H project book, yet it was created with resources for youth ages 4-12. But there is no free, online and easily-accessible, one and done half-day workshop curriculum that can be integrated into a camp or retreat setting to introduce the concept.

Below, I have provided objectives for this workshop. I believe a good opportunity to provide this workshop to youth could be at Penn State county 4-H camps. I hope you will seriously consider this proposal.

Mindfulness Moments: Today and 4-Life

Target audience

4-H Youth, ages 10-18

Objectives

By completing this workshop, children will be able to:

- Understand the concept of mindfulness.
- Apply mindfulness concepts by completing guided activities, such as yoga, deep breathing, and other meditation exercises.
- Analyze and reflect upon how they can apply mindfulness in their daily lives.
- Connect and apply mindfulness concepts to leadership concepts.

In addition, I would like to inform you that the Penn State United Nations Educational, Scientific and Cultural Organization (UNESCO) is a partner for this project. UNESCO recognizes and supports youth leadership development through 4-H and other capacities. UNESCO recognizes youth leadership as a domestic and international issue and leads work in both of these dimensions. Beyond involvement in this project, Penn State UNESCO is willing to provide additional leadership connections, opportunities and programs to 4-H Youth in Pennsylvania. If interested learning more about this, please let me know, or reach out to the chair, Dr. Mark Brennan (unescochair@psu.edu), directly.

Please, feel free to contact me if you have any questions as you review this. I look forward to exploring how my goals to promote positive youth development may align with your goals for camp this summer.

Sincerely,
Mariah

Mariah Stollar
Graduate Research Assistant | The Pennsylvania State University
Department of Agricultural Economics, Sociology and Education
Ferguson 012 | mks370@psu.edu

Appendix E

Recruitment Message and Study Consent Form

CONSENT FOR RESEARCH

The Pennsylvania State University

Title of Project: Assessing Adolescents' Experience of a Mindfulness Program at Penn State
Extension

4-H Camps

Principal Investigator: *Mariah Stollar*

Address: Mariah Stollar, Ferguson Bldg.

The Pennsylvania State University, University Park, PA 16802

Telephone Number: (740) 538-4377

Faculty Advisor: Suzanna Windon

Telephone Number: 614-271-7442

Subject's Printed Name: _____

We are asking you to be in a research study. This form gives you information about the research.

Whether or not you take part is up to you. You can choose not to take part. You can agree to take part and later change your mind. Your decision will not be held against you and there will be no penalty or loss of benefits to which you are entitled.

Please ask questions about anything that is unclear to you and take your time to make your choice.

Some of the people who are eligible to take part in this research study may not be able to give consent because they are less than 18 years of age (a minor). Instead we will ask their parent(s)/guardian(s) to give permission for their participation in the study, and we may ask them to agree (give assent) to take part. Throughout the consent form, when we say "you" we mean your child.

KEY INFORMATION

The following is a short summary of this study to help you decide whether or not to be a part of this research. More detailed information is listed later in this form. If you have any questions, be sure to ask the study team.

Why am I being invited to take part in a research study?

We are inviting your child to take part in a mindfulness research study. We are offering a mindfulness workshop at 4-H Camp this summer. Mindfulness trainings have proven to provide many health and wellness benefits to youth, for example increased compassion, academic achievement and ability to pay attention.

What is the purpose of this research study?

The purpose of this voluntary research study is to assess youth experience after the workshop.

How long will the research study last?

The workshop will last 2 hours. The pre survey will take about 10 minutes to complete and the post survey will take about 15 minutes to complete.

What will you need to do?

For this study, you will be asked to complete a pre and post survey based on your participation in the workshop.

What are the main risks of taking part in the study?

There is no risk while participating in this study. Precautionary measures will be taken to make sure all information collected is kept confidential.

What are the possible benefits to you that may reasonably be expected from being in the research?

There are no benefits to you from taking part in this research (I.e. completing the survey). What you learn in the workshop may have future health and wellness benefits. Results of the study may benefit others people in the future by increasing awareness of and demonstrating the need for mindfulness and leadership curriculum in 4-H youth development programs. This could lead to other state 4-H programs integrating mindfulness and leadership into their programs.

What happens if you do not want to be in this research?

Participation in research is completely voluntary. You can decide to allow your child to participate or not to participate. You may choose not to let your child take part in this research study.

DETAILED INFORMATION

The following is more detailed information about this study in addition to the information provided above.

1. Why is this research study being done?

Mindfulness trainings have proven to provide many health and wellness benefits to youth, for example increased compassion, academic achievement and ability to pay attention. This research is being done to find out youth experience of participating in a mindfulness workshop at Pennsylvania 4-H camps. Approximately 100 participants will take part in this research study at Pennsylvania 4-H camps. Results of the study may benefit others people in the future by increasing awareness of and demonstrating the need for mindfulness and leadership curriculum in 4-H youth development programs. This could lead to other state 4-H programs integrating mindfulness and leadership into their programs.

2. What will happen in this research study?

Your child will complete a pre-test survey before participating in a mindfulness workshop at 4-H camp and will complete a post survey after participating in the workshop. The pre-test will take about 10 minutes and the post test will take about 15 minutes to complete. Your child may skip any questions they prefer not to answer.

3. What are the risks and possible discomforts from being in this research study?

There is a risk of loss of confidentiality if your information or your identity is obtained by someone other than the investigators, but precautions will be taken to prevent this from happening. The confidentiality of your electronic data created by you or by the researchers will be maintained as required by applicable law and to the degree permitted by the technology used. Absolute confidentiality cannot be guaranteed.

4. What are the possible benefits from being in this research study?

4a. What are the possible benefits to you?

You will not benefit from this research study. What you learn in the workshop may have future health and wellness benefits.

4b. What are the possible benefits to others?

Results of the study may benefit others people in the future by increasing awareness of and demonstrating the need for mindfulness and leadership curriculum in 4-H youth development programs. This could lead to other state 4-H programs integrating mindfulness and leadership into their programs.

5. What other options are available instead of being in this research study?

Participation in research is completely voluntary. You can decide to allow your child to participate or not to participate. You may choose not to let your child take part in this research study.

6. How long will you take part in this research study?

Being in this research study does not require any additional time on your part.

7. How will your privacy and confidentiality be protected if you decide to take part in this research study?

7a. What happens to the information collected for the research?

Collected data will be stored in a locked room at the Pennsylvania State University. Only the researcher will have access to the data.

Efforts will be made to limit the use and sharing of your personal research information to people who have a need to review this information. Reasonable efforts will be made to keep the personal information in your research record private. However, absolute confidentiality cannot be guaranteed.

In the event of any publication or presentation resulting from the research, no personally identifiable information will be shared.

We will do our best to keep your participation in this research study confidential to the extent permitted by law. However, it is possible that other people may find out about your participation in this research study. For example, the following people/groups may check and copy records about this research.

- The Office for Human Research Protections in the U. S. Department of Health and Human Services
- The Institutional Review Board (a committee that reviews and approves research studies) and Penn State's Office for Research Protections.

7b. What will happen to my research information and/or samples after the study is completed?

The data will be destroyed after the study is complete.

1. What are the costs of taking part in this research study?

8a. What will you have to pay for if you take part in this research study?

There is no cost to participate.

8b. What happens if you are injured as a result of taking part in this research study?

In the unlikely event you become injured as a result of your participation in this study, medical care is available. It is the policy of this institution to provide neither financial compensation nor free medical treatment for research-related injury. By signing this document, you are not waiving any rights that you have against The Pennsylvania State University for injury resulting from negligence of the University or its investigators.

9. Will you be paid or receive credit to take part in this research study?

You will not receive any payment or compensation for being in this research study.

11. What are your rights if you take part in this research study?

Taking part in this research study is voluntary.

- You do not have to be in this research.
- If you choose to be in this research, you have the right to stop at any time.
- If you decide not to be in this research or if you decide to stop at a later date, there will be no penalty or loss of benefits to which you are entitled.

12. If you have questions or concerns about this research study, whom should you call?

Please call the head of the research study (principal investigator), Mariah Stollar at 740-538-4377 if you:

- Have questions, complaints or concerns about the research, including questions about compensation.
- Believe you may have been harmed by being in the research study.

You may also contact the Office for Research Protections at (814) 865-1775, IRB-ORP@psu.edu[mailto:](mailto:IRB-ORP@psu.edu) if you:

- Have questions regarding your rights as a person in a research study.
- Have concerns, complaints, or general questions about the research.
- You may also call this number if you cannot reach the research team or wish to offer input or to talk to someone else about any concerns related to the research.

You may visit the Office for Research Protections' website at

<https://www.research.psu.edu/irb/participants> for:

- Information about your rights when you are in a research study;
- Information about the Institutional Review Board (IRB), a group of people who review the research to protect your rights; and
- Links to the federal regulations and information about the protection of people who are in research studies. If you do not have access to the internet, copies of these federal regulations are available by calling the ORP at (814) 865-1775.

INFORMED CONSENT TO TAKE PART IN RESEARCH**Signature of Parent(s)/Guardian for Child**

By signing this consent form, you indicate that you permit your child to be in this research and agree to allow your child's information to be used and shared as described above.

Printed name of child

Signature of Parent/Guardian

Date

Time

Printed Name

☐ Parent

☐ Individual legally authorized to consent to the child's general medical care. (See note below.)

Appendix F**Study Assent Form****Assent Form**

This form confirms that you understand your participation in this research (completing the survey) is **completely voluntary**.

By signing this form, you are indicating that you understand:

- That there are no consequences to participation
- That there are no consequences to not participating
- That there are no risks being involved in the study; and
- That while completing the questionnaire, you may stop answering questions at any time.

In addition, you are confirming that the researcher (Mariah Stollar) described the study and that you verbally agreed to participate.

Your name (please print) _____ Age _____

Your signature _____ Date _____

Witness name (please print) _____ Age _____

Witness signature _____ Date _____

Appendix G

Additional Implication Letter to Pennsylvania 4-H

Mariah Stollar
Graduate Research Assistant
The Pennsylvania State University
012 Ferguson Building
University Park, PA 16802

Wednesday, February 5, 2020

Dr. Joshua Rice
Assistant Director, 4-H Youth Development Programs
The Pennsylvania State University
323 Agricultural Administration Building
University Park, PA 16802

Dear Dr. Rice:

I am writing to inform you of additional program implementation and evaluation recommendations for the *Mindfulness Moments: Today and 4-Life (MMT4L)* program. My study's evaluation questions were related to knowledge gained of mindfulness, intention of participants to apply mindfulness practices, and desire to learn more about mindfulness. However, I believe the following information, which was beyond the scope of my evaluation questions, will be useful for future program replication.

Recommendations to further evaluate the effectiveness of the MMT4L curriculum:

- Because the program was an introductory, lower scoring areas from the instrument may inform which areas are needed for future 4-H mindfulness curriculum development and programming.
- The program should be implemented and evaluated in more 4-H camps within Pennsylvania and other states to better determine its effectiveness for 4-H youth in camp settings.
 - Because the sample of the program study was small and not random, Pennsylvania 4-H should repeat the program next summer with a larger, randomly selected population of 4-H youth. Camps could be randomly assigned as to receiving the program or having to serve as the control by taking a stratified sample. Participation of more camps and random sampling would help to further validate study findings and program effectiveness.
- The program also should be implemented and evaluated in other 4-H settings, such as at club meetings, officer trainings, and conferences to demonstrate program setting and audience versatility.
- To determine the effectiveness of this program for youth outside of a 4-H and Extension context, this program should be implemented in various youth settings, such as educational and community settings with non-traditional Extension audiences.
- This program's program evaluation should be enhanced to include a post-test follow up after several weeks to better determine whether or not youth retained and are applying mindfulness practices they learned from the program in their daily lives. Also, further longitudinal studies should be conducted with program alumni to examine a relationship between participation in mindfulness programming and future leadership development.

Sincerely,
Mariah Stollar
Graduate Research Assistant