An Examination of Nature Relatedness, Nature Exposure, and Quality of Work-Life Among Student Affairs Professionals

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An Examination of Nature Relatedness, Nature Exposure, and Quality of Work-Life Among Student Affairs Professionals

By
Breanne Hiivala

A Dissertation Submitted in Partial Fulfillment of the Requirements for the Degree of Doctor of Education Counselor Education & Supervision at Minnesota State University, Mankato

Mankato, Minnesota

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An Examination of the Relationship between Nature Relatedness, Nature Exposure, and Quality of Work-Life Among Student Affairs Professionals

Breanne Hiivala

This dissertation has been examined and approved by the following members of the student’s dissertation committee:

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Breanne Hiivala

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Minnesota State University, Mankato
Mankato, Minnesota

2020

ABSTRACT

This study explored the relationship with nature within the realm of career development. More specifically, it examined the relationship between nature relatedness, nature exposure, and quality of work-life among student affairs professionals. The participants identified as members of the American College and Personnel Association (n=275). A Pearson Product Moment Correlation Matrix ($r$) and a simple linear regression were used in this study. There were significant small correlations found between nature relatedness and quality of work-life variables such as home-work interface, job and career satisfaction, working conditions, and stress at work. Additionally, significant relationships were found between nature exposure and nature relatedness. Implications for student affairs professionals and career development are described and recommendations for future research are discussed.
Chapter I

INTRODUCTION

*The Earth's cry for rescue from the punishing weight of the industrial system we have created is our own cry for a scale and quality of life that will free each of us to become the complete person that we were meant to be* (Roszak, 2001, p. 14).

We are currently living in a world with an unstable climate, increasing globalization, and increasing disconnect from the natural world (Houlden, Weich, de Albuquerque, Jarvis, & Rees, 2018; Roszak, Gomes, & Kanner, 1995). The urbanization of natural environments is growing by the year, which is resulting in decreased access to nature for human beings (Houlden et al., 2018). The typical person who lives in the United States spends nearly 90% of their life indoors (Evans & McCoy, 1998). Today’s workforce faces unique challenges associated with this disconnect (Evans & McCoy, 1998; Williams, 2017). In fact, it was in 2008 that the World Health Organization officially acknowledged humans as an ‘urban species,’ as more people now live and work in urban environments than in rural places (Williams, 2017, p. 11).

The process of connecting with nature contributes to quality of life, including the quality of work-life (Williams, 2017, pp. 131-147). However, little attention has been placed on the role of nature and quality of work-life in contemporary career development research (Peruniak, 2010, pp. 152-153). Geoffrey Peruniak (2010) addressed this gap in his original text, *A Quality of Life Approach to Career Development*. In addition, Alfred Adler (1930) described work as a central life task that is inseparable from all other parts of quality of life (Sweeney, 2019). Alfred Alder believed in the concept of holism,
meaning to understand the human experience, one must understand the whole of the individual (Adler, 1930; Sweeney, 2019). Holism includes physical and mental health, satisfaction with work, relationship with society and nature, and joy in all aspects of life (Sweeney, 2019, pp. 43-48). In fact, while Adler was the first psychologist to discuss the importance of viewing human health from a holistic perspective, the idea of the mind-body connection and holistic wellbeing dates back to ancient times.

This ancient knowledge is described by Witmer (1985) as follows:

The concept of health and wellness as encompassing mind-body unity reaches back thousands of years to middle eastern religions, ancient Greeks, and far eastern philosophies. Greek medical tradition like the Jewish healing tradition exemplified in Christ, treated the whole person. Mind and body were not separated but seen as interrelated and interdependent (p. 43).

The goal of career counselors is to help people within the contexts of their whole selves find meaning in work and establish a quality work-life (Canadian Council for Career Development, 2019). There is a great responsibility for helpers to provide ecological and holistic approaches to career development, that keep nature in mind (Borgen & Hiebert, 2014). The study intention is to bridge the gap between industrial and nature-based research within the realm of career development. It will examine the relationship between nature relatedness, exposure, and quality of work-life in student affairs professionals in order to add to this body of research.
**Nature Relatedness**

In recent centuries, the human-nature bond has been progressively threatened by increased instrumentalism and consumerism (Wang, 2016). As the disconnect between humans and nature widens, both people and the environment suffer (Carson, 1962; Houlden et al., 2018; Kimmerer, 2013; Louv, 2011; Roszak et al., 1995). There are several harmful side effects caused by disconnect from the natural world. Some side effects include lack of attention to species loss and sustainability, global crises, increased waste production, global warming, climate disasters, mass consumerism, and pollution (Carson, 1962, pp. 7-12).

The idea that people are one with nature is not new. This concept has been a part of indigenous wisdom for millennia (Roszak et al., 1995; Shepard, 1995, pp. 21-40). Eastern philosophies, particularly Taoist and Buddhist philosophy, postulate that connection within the self (e.g., mindfulness) and connection with the greater natural world can have abundant health effects on the human condition and psyche (Wang, 2016). In the West, similar ideas have been espoused in the field of Ecopsychology. Ecopsychology is a field in which a person’s individual holistic quality of life elements (personality, environment, emotion, social aspects, cognition) are recognized within the context of the ecological biosphere (Roszak et al., 1995).

The discussion of how the human-nature connection impacts quality of work-life is just a small piece of a more significant conversation. One’s nature relatedness has been shown to have a positive relationship with overall quality of life (Howell & Passmore, 2013; Passmore & Howell, 2014; Ryan et al., 2010; Zhang, Howell, & Iyer, 2014).
Although overall quality of life has been linked to nature relatedness in contemporary research, there has been limited research on the relationship between the constructs of quality of work-life and nature relatedness.

Nature is related to a person’s career development as much as it is related to all systems-based conversations, including the consumption of natural resources, ecological patterns, industry, and education (Peruniak, 2010, p. 148). From a holistic approach to career development and a holistic examination of quality of work-life, a consideration of nature might seem self-evident. Although nature relatedness has not been widely explored in career development, the human-nature connection has been researched in recent years, with studies focusing primarily on nature exposure.

**Nature Exposure**

While nature relatedness refers to one’s intrapersonal connection with nature, nature exposure describes one’s concrete, physical exposure to nature. The holistic benefits of nature exposure and quality of life have been well established (Hartig, Mitchell, de Vries, & Frumkin, 2014; Hyvönen et al., 2018; Louv, 2011; Lumber, Richardson, & Sheffield, 2017; Maller et al., 2008). In fact, research has shown that even minimal exposure nature may have a positive impact on wellbeing (Houlden et al., 2018; Kaplan, 1993; Largo-Wright, Chen, Dodd, & Weiler, 2011; Louv, 2011; Lumber et al., 2017). For instance, Maller et al. (2008) suggest that nature is a key factor in holistic health. It has been shown that a person’s immediate access and exposure to nature impacts their quality of life especially in residential (Louv, 2011, pp. 231-237; Williams, 2017, pp. 135-141), employment (Hyvönen et al., 2018; Largo-Wright et al., 2011; Louv,
Houlden et al. (2018) found in a recent meta-analysis that there is sufficient evidence that positive relationships exist between greenspace and general life satisfaction (hedonic wellbeing). Houlden et al. (2018) also found in their meta-analysis that views of greenery appear to be associated with mental wellbeing as found in several studies. They did state that results in previous research are varied, and there is not a universal way of measuring access to nature, so future research in this area is much needed.

In addition to exposure to nature in daily life, research has also shown that there are clear benefits to exposure to nature at work, including reduced workplace stress and greater satisfaction with work-life (Kaplan, 1993; Leather, Pyrgas, Beale, & Lawrence, 1998; Russell et al., 2013). For example, Leather et al. (1998) found in a study that workers who were employed in production (n=100) there was a significant effect for access to sunlight on workers’ job satisfaction, retention, and well-being. They also found that just having access to view of nature (e.g. plants and trees) were found to reduce work-related stress and to have a small (marginal) effect on holistic wellbeing (Leather et al., 1998). In addition, access to natural light is said to have a positive effect on workplace productivity and absenteeism (Louv, 2011, p. 184-187).

With the above findings in mind, in contemporary society, most humans spend many hours a day in spaces that lack windows and are flooded with artificial light. The growing divide between people and the natural ecosystem might be resulting in decreased quality of life in addition to further reduction of people’s reciprocal relationship with Earth—it has been said, when Earth hurts, we hurt (Conn, 1995). Therefore, nature
exposure in relation to career is a concept included in this study. Quality of work-life is a major concept in career development and is one of the goals of career counseling and quality of work-life is discussed in the next section.

**Quality of Work-Life**

The concept of quality of life is used in a number of fields and is a term widely acknowledged in research, it is both subjective and multidimensional. It is generally used to refer to a person’s positive state of being and is associated with an absence of illness (Rapley, 2003, p. 26; Ryan & Deci, 2001). The concept also includes optimal vitality and optimal functioning (Meiselman, 2016). Alfred Adler believed there are three life tasks that everyone faces in search of a holistic quality of life. They include love, community belonging, and work (Adler, 1930; Stoltz & Apodaca, 2017). The enduring process of working through life tasks includes elements of experience, reflection, and striving toward satisfaction in work and life (Canadian Council for Career Development, 2019). Adler believed that work-related quality of life and general quality of life are deeply enmeshed. The concept of quality of work-life is Adlerian in nature. This is because Adlerian counseling requires a holistic view of the individual and their environment and an integration of workplace wellness in considering holistic wellbeing (Dreikurs Ferguson, 1996). Yet, as discussed by Dreikurs Ferguson (1996), most contemporary theories fall short of addressing many important holistic factors that influence workplace wellbeing. This is part of the rationale for why continued research on holistic factors in career development is needed.
When considering a quality of life approach to career development, one can see that career and quality of work-life issues are essential facets of one’s overall wellbeing. In contemporary literature, there has been a focus on both environmental and human factors that affect quality of life. These factors have included motivation, job satisfaction, programming, and supervision (Kaplan, 1993; Russell et al., 2013). In addition, several empirical studies have shown that exposure, even just through sight, of natural features (e.g., plants or access to natural sunlight) helped reduce workplace stress (Largo-Wright et al., 2011; Leather et al., 1998), burnout (Hyvönen et al., 2018). Studies have also shown nature exposure at work may increase wellbeing (Leather et al., 1998; McMahan & Estes, 2015; Russell et al., 2013), work engagement (Hyvönen et al., 2018), general health complaints (Largo-Wright et al., 2011; Russell et al., 2013), and satisfaction with work-life (Hyvönen et al., 2018; Kaplan, 1993).

When discussing quality of work-life, including nature in the discussion provides a holistic lens that allows career practitioners to view individuals holistically within the context of the greater web of life (Peruniak, 2010, p. 153). Mautner (1996) stated, “holism in the view that the entire ecosystem forms a unity and that all its parts are interdependent. It is often associated with the view that human interests do not have a privileged position.” In addition, in A Quality of Life Approach to Career Development Peruniak (2010) combined theoretical constructs and research from an intersection of a variety of fields including philosophy, psychology, political science, and economics in order to take a more holistic view of career counseling and development. The author stated that quality of life is a notion closely related to Western ideas of holism, and
defined quality of life as a holistic concept in which the needs of the whole person are addressed, with emphasis placed on the unity of the universe, and understanding human welfare with the influence of context (Peruniak, 2010). He has suggested that the field of career development has ignored the role of nature in the context of career and indicated the links between nature and self as essential (Peruniak, 2010; p. 149). They are important because understanding this relationship adds a greater understanding of the work-life task in a holistic sense. Peruniak (2010) discussed how quality of life can be discussed both in part and in whole— and poses a couple of critical questions for researchers in the field: 1) how does nature impact quality of work-life and, 2) what role does nature play in career development? (p. 147).

**Quality of Work-Life Among Student Affairs Professionals**

The climate of higher education in the United States is in a constant state of flux. Many professionals working within this atmosphere report high levels of tension and anxiety (APA, 2017). According to Howard-Hamilton, Palmer, Johnson and Kicklighter (1998), “the personal and professional demands associated with their duties also vary widely. For example, some SAAs [Student Affairs Administrators] are required to work essentially a regular eight-hour workday, while others are required to be available twenty-four hours a day, seven days a week.” Student affairs professionals report high levels of stress and fatigue (Edwards, Van Laar, Easton, & Kinman, 2009). Several studies on turnover and intentions to leave by professionals in higher education found that new professionals indicated that stress had an impact on their job satisfaction, citing
low morale and perceived control affecting their satisfaction with work (Kortegast & Hamrick, 2009; Renn & Jessup-Anger, 2008; Rosser & Javinar, 2003; Tull, 2006).

Studies conducted in the United States, Canada, the United Kingdom, Australia, China, and India have concluded that work-related stress is a widespread phenomenon in higher education, leading to issues such as turnover, lack of employee satisfaction, reduced productivity, and decreased quality of working life (Catano et al., 2007; Court & Kinman, 2008; Edwards et al., 2009; Kinman, Jones, & Kinman, 2006; Tytherleigh, Webb, Cooper, & Ricketts, 2005; Winefield, Boyd, Saebel, & Pignata, 2008; Zhang, 2007). Increased quality of working life among student affairs professionals includes benefits such as reduced stress, less absence and turnover, improved efficiency, morale, and commitment to the institution (Edwards et al., 2009; Efraty, Sirgy, & Claiborne, 1991; Worrall & Cooper, 2006). Although current research indicates that student affairs professionals are a population that are likely to experience stress, burnout, and fatigue (Howard-Hamilton et al., 1998). There are still many questions about quality of work-life that remain unanswered, one such question is the impact of nature on quality of work-life.

There have been limited empirical studies on student affairs professionals’ wellbeing along the dimensions of job satisfaction, life satisfaction, subjective wellbeing, and holistic wellbeing (Chessman, 2015). From an Adlerian perspective, there is a need to understand the work-related wellbeing for student affairs professionals in a holistic way. One piece of this understanding lies in the understanding of the relationship between nature relatedness and quality of working life for this population. There have been no empirically based studies found on the relationship between connection with
nature and quality of work-life for SA professionals. Therefore, a need exists to examine the relationship between nature relatedness, nature exposure, and quality of work-life among student affairs professionals.

**Statement of the Problem**

Student affairs professionals tend to experience variable turnover rates, work-life stress, variable turnover rates, and issues with quality of work-life (Chessman, 2015; Edwards et al., 2009; Fontinha et al., 2016; Johnsrud & Rosser, 2002; Johnsrud, 2002; Tytherleigh et al., 2005). In addition, research has shown that nature and nature relatedness may have a beneficial relationship with psychological and physical health (Howell & Passmore, 2013; Kaplan, 1993; Passmore & Howell, 2014; Ryan et al., 2010; Zhang et al., 2014). However, there appears to be limited research on the relationship with nature and the quality of work-life for student affairs professionals. There is a need to explore the connection between nature and quality of work-life in order to contribute and acknowledge the importance of nature in the career development realm, particularly in the career lives of student affairs professionals.

**Purpose of the Study**

The purpose of this study was to examine the relationship between nature and quality of work-life of student affairs professionals. More specifically, it examined the relationship between nature and quality of work-life along the dimensions of career satisfaction, general wellbeing, home-work interface, stress at work, and control at work for student affairs professionals. Nature relatedness was measured with the Nature Relatedness Scale (NRS; Nisbet, Zelenski, & Murphy, 2009), nature exposure was
measured by the Nature Exposure Scale (NES; Kamitsis & Francis, 2013), and quality of work-life was measured by the Work-Related Quality of Life scale (WRQoL; Easton & Van Laar, 2012).

**Research Questions and Hypotheses**

This study was exploratory, and the research questions used in this study are focused on the relationships between the variables of nature relatedness, nature exposure, and quality of work-life. Therefore, a descriptive correlational research design will be used (Heppner, Owen, Thompson, Wampold, & Wang, 2016). Three research questions were examined in this study as described below:

**Research Question 1.** What is the relationship between nature relatedness (as measured by the NRS), nature exposure (as measured by the NES), and quality of work-life (as measured by the WRQoLS) among student affairs professionals?

H0: There are no relationships between the subscales of nature relatedness, nature exposure, and quality of work-life among student affairs professionals.

H1: There are relationship(s) between the subscales of nature relatedness, nature exposure, and quality of work-life among student affairs professionals.

**Research Question 2.** Does nature relatedness (as measured by NRS total score) predict quality of work-life (as measured by WRQoLS total score) among student affairs professionals?
H₀: There will be no significant prediction of work-related quality of life (total score) by nature relatedness (total score) for student affairs professionals.

Hₐ: There will be a significant prediction of work-related quality of life (total score) by nature relatedness (total score) for student affairs professionals.

**Research Question 3.** Does nature exposure (as measured by NES total score) mediate the relationship between nature relatedness (as measured by NRS total score) and quality of work-life (as measured by WRQoLS total score) for student affairs professionals?

H₀: Nature exposure (NES total score) will not mediate the relationship between nature relatedness (NRS total score) and quality of work-life (WRQoLS total score) for student affairs professionals.

Hₐ: Nature exposure (NES total score) will mediate the relationship between nature relatedness (NRS total score) and quality of work-life (WRQoLS total score) for student affairs professionals.

**Definition of Terms**

The following definitions are used in this study:

**Nature.** Nature is generally defined as an “organic environment where the majority of ecosystem processes are present (e.g., birth, death, reproduction, relationships between species)” (Maller, Townsend, Pryor, Brown, & St Leger, 2005). Nature refers to nonhuman physical life and geological processes. This definition is broad, and the
ecosystem may include parks, grass wilderness, gardens, plants, animals, and even indoor
nature related items like green spaces and indoor plants (Hartig et al., 2014; Maller et al.,
2005; Reese & Myers, 2012).

**Nature Relatedness.** Nature Relatedness (NR) describes an individual’s
connection with the natural world, as an appreciation of the understanding of how one
connected with other forms of life on Earth (Nisbet, et al., 2009). NR involves a
psychological, physical, and emotional connection with nature (Nisbet et al., 2009).
Nature relatedness includes a person’s connectedness with nature and appreciation for
nature (Kamitsis & Francis, 2013).

**Nature Exposure.** Nature exposure refers to a person’s contact with nature in
both everyday life and outings or excursions. Nature exposure can take many forms and
can include exposure to nature through city parks, hills, streams, lakes, oceans (including
having a view of natural environments) (Kamitsis & Francis, 2013). Natural
environments are said to have a contrast to human-made environments (e.g., concrete
structures, highways, buildings) (Kamitsis & Francis, 2013).

**Student Affairs.** According to the American College Personnel Association
(ACPA), “at its broadest definition, student affairs could be said to consist of any
advising, counseling, management, or administrative function at a college or university
that exists outside the classroom” (Love, 2003). Student Affairs Professionals are people
who serve and support students within these divisions in higher education. There are
many roles within the student affairs profession ranging from new professional (0-5 years
of experience in higher education), mid-level professional (minimum of a master’s degree
and 5+ years of higher education experience), to senior professional (minimum of a master’s degree and senior position title of vice chancellor, VP, dean or director or related position). Some examples of student affairs positions might include; career development counselor, residence director, academic advisor, director of housing, vice-chancellor, admissions representative, financial aid consultant, and women’s center advocate (Arvidson & Baier, 2003; Love, 2003).

**Quality of Work-Life.** Quality of Work-Life (QoWL) is intended to capture the essence of a person’s quality of work-life in a holistic sense (Easton & Van Laar, 2012). A person’s experience at work influences QoWL. The influence is captured in a broad sense and captures a person’s feelings of general wellbeing. These influences include work-based factors such as job satisfaction, satisfaction with pay, and relationships with work colleagues, as well as factors of subjective life satisfaction and wellbeing (Danna & Griffin, 1999; Edwards et al., 2009). Quality of Work-Life (QoWL) is theoretically similar to general wellbeing, and also integrates concepts of job satisfaction within (Lawler, 1982).

**Wellbeing.** The World Health Organization (WHO) defines wellbeing as a person’s optimal state of psychological, physical, spiritual, economic, and holistic health (Kamitsis & Francis, 2013; Smith, Tang, & Nutbeam, 2006). Wellbeing includes a general sense of satisfaction about one’s personal standard for quality of life. Subjective well-being (SWB) has been defined as a person’s cognitive and emotional perception and satisfaction with their own life (Diener, Lucas, & Oishi, 2002).
Summary

This chapter provided an overview of the nature and purpose of this study. The purpose of this study was to examine the relationship between nature relatedness, nature exposure, and quality of work-life among student affairs professionals. This population is widely known to experience generally varying levels of quality of work-life and high levels of stress. The research has indicated that one factor that may impact quality of work-life is a person’s connection with nature. An in-depth exploration of literature related to these concepts are discussed in chapter two.
Chapter II

LITERATURE REVIEW

Chapter two describes the current literature related to this study in the areas of nature relatedness, nature exposure, and quality of work-life among student affairs professionals.

Nature Relatedness

We are currently living in a global environmental crisis, with dramatic increases in threats to quality of life, including rapid population growth, high rates of consumption, and lowered sustainability (Carson, 1962; Oskamp, 2000). It has been said that in contemporary industrialized societies, people tend to try to see themselves as separate from nature and Earth in a hierarchy of beings, with people at the top (Kimmerer, 2013, p. 9). Attempts at separation, however, are arbitrary as humans have been a part of nature for as long as they have existed as a species (Hillman, pp. xvii-xxiii). In addition, the artificial boundaries people create are problematic in obtaining a holistic understanding of wellbeing in contemporary social science research (Hillman, pp. xvii-xxiii). Additional research is needed in the intersect of Ecopsychology and career development counseling.

The acknowledgment of the connection between human psychology and nature is ancient. However, it has only been since the 1990s that a well-defined name for the study of this connection emerged. The field of Ecopsychology was created in response to a historical separation between psychological and ecological science. The Ecopsychology field acknowledges the association between a person’s wellbeing and the health of the natural environment (IES, 2019; Roszak, 2001). Ecopsychology is known for the idea
that human beings are inseparable from the natural world (Roszak, 2001). The philosophy behind Ecopsychology is that people experience greater health and wellbeing through reunification with the Earth (Roszak, 2001). As stated by Dr. Conn, a Clinical Psychologist, “the world is sick; it needs healing; it is speaking through us; and it speaks the loudest through the most sensitive of us” (Conn, S., 1990; Roszak, 1995, pp. 12-13). The field of Ecopsychology acknowledges this observation and calls for a deeper understanding gained through an interdisciplinary approach to research. Within this, there is an understanding that no single discipline will have all of the answers and that there is a need to integrate research efforts in order to gain a better understanding of the human condition.

Two of the founders of Ecopsychology are Roszak (1992) and Cohen (1997), who brought attention to the role that nature plays in the holistic wellbeing of people. Ecopsychology is based on the idea that humans’ connection with nature deeply relates with human quality of life (Roszak, 2001). For example, research has demonstrated that a person’s nature relatedness correlates with quality of life at levels consistent with other well-established factors such as personal income (Richardson et al., 2017). If nature plays a vital role in psychological health and wellbeing, it is important to also include nature in the research about work-related quality of life.

Ecopsychology is based on the Biophilia hypothesis. Fromm (1964) and Wilson (1984) were the earliest social science researchers to utilize the term. Biophilia refers to a feeling of oneness with nature, and includes a mental, physical, and emotional connection between humans and the ecosystem (e.g., plants, flowers, landscapes, animals and natural
surroundings) (Fromm, 1964; Wilson, 1984). Wilson (1984) stated, “to the degree that we come to understand other organisms, we will place greater value on them, and on ourselves” (p. 2). The Biophilia hypothesis has spurred on a variety of research efforts in Ecopsychology in order to provide some form of empirical evidence that humans naturally gravitate toward respect, appreciate, and awe for the natural world—and in turn the health of the ecosystem directly impacts the health of human psyche (Roszak, 1995; pp. 4-5).

From an Ecopsychological perspective, a person is considered wholly and fully, a part of nature (Roszak, 2001). As stated by Andy Goldsworthy, British Artist and Environmentalist “we often forget that we are nature. Nature is not something separate from us. So when we say that we have lost our connection to nature, we’ve lost our connection to ourselves.” This quote illustrates the essence of Ecopsychology. In Ecopsychology, the core tenets surround idea that holistic wellbeing is closely linked in the ability to live in harmoniously with nature (Roszak, 2001). Passmore and Howell (2014) suggested that “cultivating our innate biophilic tendencies through experiences with natural environments plays a fundamentally important role in addressing the four existential anxieties as outlined by Yalom (1980)—meaning in life, isolation, freedom, and death.” Ecopsychologists often examine the relationship between nature relatedness and quality of life aspects (Brymer, Cuddihy, & Sharma-Brymer, 2010; IES, 2019). This relationship is evidenced by numerous empirical studies that found that increased nature relatedness is associated with mental health and wellbeing (Louv, 2011; Passmore & Howell, 2014; Ryan et al., 2010; Zhang et al., 2014). For example, Mayer and Frantz
(2004) and Tam (2013) found that participants who report higher connectedness with nature are more satisfied with life and report greater happiness than those who do not report feeling connected with nature.

Hedonic and eudaimonic wellbeing are two constructs are consistently used in the literature. Hedonic wellbeing is also known as subjective wellbeing and is primarily related to one’s positive experience in life in a holistic sense (Page & Vella-Brodrick, 2009). The hedonic approach emphasizes happiness and defines wellbeing in terms of avoidance of pain and pursuit of happiness (Ryan & Deci, 2001). Meanwhile, eudaimonic wellbeing is known as psychological wellbeing (Page & Vella-Brodrick, 2009). The eudaimonic approach focuses on meaning and self-actualization. It defines wellbeing in terms of the holistic health and functioning of the individual within their ecological system (Ryan & Deci, 2001). There has been an agreement among authors in different fields that humans benefit from having a connection with nature, in terms of both hedonic and eudaimonic wellbeing. This agreement is echoed by environmentalists (Leopold, 1949; Muir, 1894), psychologists (Edwards et al., 2009; Mayer, Frantz, Bruehlman-Senecal, & Dolliver, 2009), nature writers (Louv, 2011; Muir, 1894), poets (Oliver, 2016; Shepherd, 1977), biologists (Carson, 1962; Kimmerer, 2013), and philosophers to name a few.

There is a growing body of research illuminating the positive relationship between nature relatedness and wellbeing (Capaldi, Dopko, & Zelenski, 2014; Dean et al., 2018; Lawton, Brymer, Clough, & Denovan, 2017; Myers & Sweeney, 2004; Nisbet et al., 2011; Reese, Lewis, Myers, Wahesh, & Iversen, 2014; Zelenski & Nisbet, 2014).
The construct of nature relatedness reflects a person’s intrapersonal relationship with nature (Zelenski & Nisbet, 2014). Nature relatedness impacts people on physical, mental, emotional, and spiritual levels (Reese et al., 2014; Roszak, 2001). Nature relatedness describes the extent to which a person feels an affinity for or connection to nature on cognitive, affective, and physical levels (Nisbet et al., 2009). Nature relatedness includes both a person’s physical access nature and also a sense of personal affinity with nature (Nisbet et al., 2009). It has been found useful in understanding wellbeing and has been observed in holistic wellbeing research in recent years (Nisbet et al., 2011; Reese et al., 2014; Zelenski & Nisbet, 2014).

Over the last 20 years, the significance of human connectedness with nature has been gaining momentum (Brymer & Cuddihy, 2009; Mayer & Frantz, 2004). This development marks a shift toward a holistic viewpoint in career development literature. It is important to note, however, that although contemporary career literature has mostly ignored the human-nature connection, the relationship between this connection and wellbeing is not a new idea. It is vital to honor Native ways of knowing as researchers continue to explore this line of research. Original Peoples have both acknowledged and embraced the need for human-nature connection and have described the wellbeing of humans as indistinguishable from that of the Earth (Kimmerer, 2013; Rust, 2009). Native ways of knowing date back millennia, far before Western classic or contemporary career development research was established.

In Western tradition there is a recognized hierarchy of beings, with, of course, the human being at the top—the pinnacle of evolution,
the darling of Creation—and the plants at the bottom. But in Native ways of knowing, human people are often referred to as, “the younger brothers of Creation.” We say that humans have the least experience with how to live and thus the most to learn—we must look to our teachers among the other species for guidance.…

Plants know how to make food and medicine from light and water, and they give it away (Kimmerer, 2013, pp. 9-10).

Researchers in Ecopsychology draw on the perspectives of Original Peoples when conceptualizing the spirit of self within the higher contexts of our Earthly existence. The vastness of the Earthly self has been voiced by Original Peoples across groups and cultures and through the strands of time (Rust, 2009). For instance, the Okanagan views on the concept of self as a fluid expression of nature is described by Okanagan author Jeannette Armstrong (1995):

> Okanagans teach that our flesh, blood, and bones are Earth-body; in all cycles in which the Earth moves, so does our body…. Our word for body literally means, “the land-dreaming capacity”… the Okanagan teaches that emotion or feeling is the capacity whereby community and land intersect in our beings and become part of us. This bond or link is a priority for our individual wholeness or well-being (p. 316).

In addition to ancient knowledge, contemporary researchers have been identifying a link between Earth and human wellbeing. For example, Zhang et al. (2014) suggested that research has shown a relationship between subjective wellbeing and nature
relatedness. Zhang et al. (2014) wanted to demonstrate further that engagement with natural beauty would moderate the effect between one’s nature connectedness and psychological wellbeing. They found that participants (n=1108) who reported more nature connectedness and perception also reported higher levels of openness, extraversion, conscientiousness, and agreeableness. In addition, nature connectedness was found to be negatively correlated with neuroticism (Zhang et al., 2014). They also found that participants in their second study (n=151) reported more self-esteem if they also perceived natural beauty. In terms of demographic factors, age was found to be positively correlated with connectedness with nature. Lastly, perceiving nature’s beauty was positively correlated with connectedness with nature and self-esteem (Zhang et al., 2014).

There is evidence in current research that one’s relatedness with nature has an effect on our life satisfaction, motivation, community and connection with Earth (Chang & Chen, 2005; Hartig, Kaiser, & Bowler, 2001; Hartig, Kaiser, & Strumse, 2007; Hine, Peacock, & Pretty, 2007; Hoot & Friedman, 2011; Mackay & Neill, 2010; Martyn & Brymer, 2016; Passmore & Howell, 2014; Richardson, Hussain, & Griffiths, 2018). It has been demonstrated in many studies that being connected with nature is associated with various elements of holistic wellbeing including; psychological wellbeing, social interest, finding meaning, and holistic health (Herzog & Strevey, 2008; Howell, Dopko, Passmore, & Buro, 2011; Nisbet et al., 2011; Passmore & Howell, 2014).

People with higher levels of connection with nature have subsequently reported greater subjective wellbeing, mental health, higher levels of happiness, social wellbeing,
and higher levels of satisfaction with life than people with lower connectedness with
nature (Howell et al., 2011; Mayer & Frantz, 2004; Zhang et al., 2014). Nisbet et al.
(2011) found that nature relatedness was positively correlated with vitality, personal
growth, and meaning in life. It was suggested that nature relatedness had a positive
relationship with hedonic (emotional) well-being. They conducted three studies involving
nature relatedness and wellbeing measures. In their first study with Canadian
undergraduate students (n=184), it was found that NR was more closely related to
psychological wellbeing measures than other environmental measures. They also
conducted a study with executives (n=145) and found that there were significant positive
correlations between NR and wellbeing measures. Nisbet et al. (2011) found that NR was
positively correlated with hedonic wellbeing in both college students and executives. In
this study, the eudaimonic dimensions that were positively associated with nature
relatedness were vitality and personal growth and the hedonic dimensions were positive
emotions, meaning in life, and the ability to overcome worries and frustrations. In their
third study with undergraduate students (n=170), participants were surveyed about their
environmental viewpoints at the beginning and end of the semester after completing
environmental education coursework. It was found that NR served as a mediator between
the effects of environmental education on wellbeing. Nisbet et al. (2011) suggested that
NR should be included in future research, especially in the realms of quality of life issues
such as stress, mental health, and vitality.

Research has shown the relationship nature has with mental health. For example,
Martyn and Brymer (2016) found that participants’ (n=305) increased nature relatedness
was related to decreased levels of cognitive and somatic forms of anxiety (Martyn & Brymer, 2016). In addition, researchers in this study conducted a qualitative analysis on what nature meant to the participants. After they collected participant responses, they found that participants described themes such as: relaxation, time out, enjoyment, connection, perspective, and sensory engagement (Martyn & Brymer, 2016). Participants reported that feeling a connection with nature induced feelings of relaxation, lowered levels of stress, and increased fulfillment. In addition, there was a significant relationship between increased nature relatedness and lower levels of anxiety (Martyn & Brymer, 2016). This is similar to findings demonstrated in other recent studies on the relationship between increased connection to nature and lowered anxiety (Chang & Chen, 2005; Mackay & Neill, 2010).

Nisbet et al. (2009) found that students enrolled in environmental psychology course reported wellbeing scores and nature relatedness scores increased over time as they remained in the course. Meanwhile, in another study looking at the relationship between nature relatedness and wellness (n=165), there was an association found between nature relatedness and the five factors of wellness (Reese et al., 2014). Reese et al. (2014) found that nature relatedness was positively correlated with increased physical wellness. They also found a negative relationship between the NRS-Total score and spirituality (Reese et al., 2014). The finding between NR and spirituality was inconsistent with previous research studies. Previous research has shown that connectedness with nature may be positively related to spirituality (Reese et al., 2014; Sweatman & Heintzman, 2004). For example, Sweatman and Heintzman (2004) found that youth reported
experiences in an residential camp had an effect on their spirituality. They also reported that spending time in natural settings impacted their spirituality. In addition, a recent study with Canadian undergraduate students (n=311) explored the relationships among nature connectedness, well-being, and mindfulness among undergraduate students. It was found that meaning in life mediated the relationship between nature connectedness and measures of wellbeing, and nature connectedness mediated the relationship between religiousness and wellbeing (Howell, Passmore, & Buro, 2013).

Jordan (2009) highlights the reciprocal nature of human wellbeing in relation to the wellbeing of the Earth by saying that our relationship with the planet and the oppressive conditions surrounding the environment are contributing to anthropological distress. Humans influence the health of the planet and ecosystem, which, in turn, holds a cyclical and profound effect on people as well (Passmore & Howell, 2014). Therefore, it is essential that we move toward an eco-centric point of view in which our relationship with nature is not viewed as separate but rather an interconnected and mutually beneficial relationship for holistic health and wellbeing (Adams & Jordan, 2016; Passmore & Howell, 2014). Nature relatedness has been demonstrated to have a positive relationship with various quality of work-life constructs such as wellbeing, happiness, and satisfaction with life (Capaldi et al., 2014; Mayer et al., 2009; Richardson et al., 2017).

**Nature Exposure**

There appears to be an increasing disconnect between people and the natural environment. In the last century, people spend more time indoors and report feeling increasingly disconnected from nature (Capaldi et al., 2014). The research has revealed
that the growing disconnect from nature may have a harmful influence on quality of life and happiness (Berman, Jonides, & Kaplan, 2008; Capaldi et al., 2014; Louv, 2011; MacKerron & Mourato, 2013; Mayer et al., 2009; Nisbet et al., 2011; White, Alcock, Wheeler, & Depledge, 2013).

For example, a recent study examined smartphone use, nature connectedness, and anxiety among 310 individuals in the UK (Richardson et al., 2018). The researchers found that higher problematic smartphone use resulted in lower levels of nature relatedness and anxiety was correlated with problematic cell phone usage (Richardson et al., 2018). This study suggests that perhaps that increasing use of technology might be related to decreased NR and increased anxiety. There is anecdotal evidence of this relationships as well. For instance, Richard Louv (2011) describes this phenomenon in The Nature Principle: Reconnecting with Life in a Virtual Age:

...keeping that bond or establishing an evolved relationship with nature
is no easy thing. My office in San Diego is a sea of distraction.
Two computers, two printers, a fax/answering machine/scanner,
a negative and slide scanner, a radio, and four hard drives sit on my desk;
beneath it, a tangle of wired that has baffled me for years
... finding balance isn’t easy (p. 21).

Feeling disconnected in a technology laden world is not uncommon. Similar sentiments were echoed by Florence Williams (2017) in her book The Nature Fix. She refers to herself as a ‘desk jockey’ and describes a feeling of ‘death by overwork’:

I spend too much time sitting inside. I maintain multiple social media
platforms that attenuate my ability to focus, think and self-reflect.

Since moving to D.C., I’ve had crying jags in traffic jams, and at times have been so tired I’ve had to pull over and nap on MacArthur Boulevard. When I do “get out in the woods,” I seem to be doing it all wrong, forgetting or unable to hear the birds or notice any dappled anything (p. 20).

There is a need for further research regarding balance, anxiety, and nature relatedness in the work environment (e.g. the relationship between technology use at work and nature relatedness).

There is evidence that being with nature impacts a person’s quality of life in a variety of ways. Mayer et al. (2009), found that participants reported considerably more psychological benefits when exposed to real nature than exposure to virtual nature. In addition, they found that participants showed a better ability to demonstrate deep socioemotional responses and reflection as compared to people exposed to non-nature settings. They also discussed the Adlerian concept of belonging in that people have a need to feel a sense of belonging to something greater than themselves and might be fulfilled through a connection with nature. In addition, Passmore and Howell (2014) found that nature involvement may increase hedonic and eudaimonic wellbeing. They devised an experimental study involving undergraduate students (n=84) who were randomly assigned to either a nature intervention or a control group. The study found that the group that experienced brief exposure to nature daily for two weeks reported higher levels of both hedonic and eudaimonic wellbeing. In addition, trait connectedness with
nature did not moderate the effect, meaning that nature exposure might be beneficial for any group of people, regardless of their existing nature relatedness. Meanwhile, Coley, Kuo, and Sullivan (1997) found that people who lived in housing developments near trees reported being generally happier than those who lived without trees nearby. Access to trees was also identified as a potential benefit toward physical health by Ulrich (1984), who found that patients with access to views of leafy trees through their room windows reported quicker recovery times, less pain, and fewer complications than patients who had a wall view.

Exposure to nature seems to have occupational wellbeing benefits as well. Research has shown that exposure to nature (e.g., walks in parks, green spaces on campus and indoor plants) have several benefits for quality of work-life (Capaldi, Passmore, Nisbet, Zelenski, & Dopko, 2015; Gray & Birrell, 2014; Hartig et al., 2014; Hyvönen et al., 2018; Largo-Wright et al., 2011; Reddon, 2019). For example, the more a person visits urban green spaces, the less likely they are to suffer from stress-related illnesses (Grahn & Stigsdotter, 2003). A recent study in Scotland (n=366) also showed significant relationships exist between the use of green spaces and employee wellbeing levels (Gilchrist, Brown, & Montarzino, 2015; Hyvönen et al., 2018). In another study, researchers examined nature contact and its effects on employee stress and health. The office staff at a southwestern university (n=503) completed both a nature contact questionnaire and a perceived stress questionnaire. They reported a significant negative relationship between nature contact and stress (Largo-Wright et al., 2011). Suggesting that nature contact at work might contribute to general quality of work-life, especially
along the dimension of stress (Largo-Wright et al., 2011). In addition, researchers found that the use of the green spaces and having access to green views like trees and flowers were positively related to employee wellbeing levels (Gilchrist et al., 2015). It seems that both nature exposure and nature relatedness have a positive influence on quality of work-life (Mayer et al., 2009).

Previous research shows that access to green spaces can help manage stress and increase psychological recovery (Hartig, Evans, Jamner, Davis, & Gärling, 2003; Herzog & Strevey, 2008; Largo-Wright et al., 2011; Laumann, Gärling, & Stormark, 2003; Tyrväinen et al., 2013). Access to nature and green spaces have been shown in recent research to have positive effects on human wellbeing (Herzog & Strevey, 2008; Maller et al., 2005; Pretty, Barton, Sellens, & Griffin, 2005). Barton and Pretty (2010) found that large psychological benefits resulted from even short exposure to nature through exercise. It was found that exercising and physical activity in green spaces helps enhance psychological wellbeing and self-esteem, their findings are consistent the results in a similar study by Tyrväinen et al. (2013), who found that even short-term visits (approximately 15 minutes) via walks in natural spaces had positive effects on stress relief. The researchers found a decrease in cortisol levels in those participants who engaged in short nature walks and activities and suggested that spending time in green space after work has a positive influence on mental health and stress management (Tyrväinen et al., 2013). Both of these studies confirm that exposure to natural environments are very important in overall psychological wellbeing (Barton & Pretty, 2010; Tyrväinen et al., 2013).
There have been studies on the restorative elements of being exposed to nature (Hartig, Böök, Garvill, Olsson, & Gärling, 1996), yet little acknowledgment that our relatedness with nature may be beneficial in many other ways of life such as career (Peruniak, 2010). Mayer et al. (2009) encouraged future researchers to explore the way our connection with nature may expand beyond just stress reduction and revitalization. They suggest that researchers might continue to search for other factors that explain nature’s benefits on holistic wellbeing. One of these factors might include how one’s nature relatedness impacts quality of work-life. The relationship between nature relatedness, nature exposure, and quality of life is well established (Largo-Wright et al., 2011; Passmore & Howell, 2014; Reese & Myers, 2012; Ryan et al., 2010; Zhang et al., 2014). As stated by any author from Australian Psychological Society, there is substantial evidence that the health and integrity of the natural environment is essential to human wellbeing (Reser, 2011). It would make sense then, that nature would be included in the conversation surrounding holistic career development, as work is a central aspect of quality of life. The discussion surrounding nature relatedness and quality of work-life is necessary and timely in today’s changing environment. However, limited research has been conducted on nature relatedness in relation to quality of work-life.

Quality of Work-Life

Quality of Life

The term Quality of Life (QOL) has been used in social research since 1948. The original definition provided by the World Health Organization was, “a state of complete physical, mental, and social well-being not merely the absence of disease” (World Health
Quality of Life and well-being are terms used in literature to refer to a person’s state of being that includes not just an absence of illness, but rather a subjective state of comfort and vitality (Diener et al., 2002; Ryan & Deci, 2001). Quality of Life includes the holistic dimensions of: physical, psychological, intellectual, and spiritual health (CCDC, 2019). In a recent concept analysis, Pinto, Lumincelli, Mazzo, Caldeira and Martins (2017) found that quality of life refers to a person’s subjective satisfaction with life. They also found that well-being is related specifically to psychological, social, and spiritual dimensions or state of being happy, comfortable, and well. According to the CDC (2019), some researchers suggest that terms of well-being and quality of life are synonymous, while others differentiate the terms from one another (CDC, 2019; Veenhoven, 2008). Quality of life is an evolving concept, with contributions made by multiple disciplines. In recent decades, there has been an increased understanding that achieving a good quality of life is not simply the absence of mental illness (Rapley, 2003, p. 26; Ryan & Deci, 2001). For this study, the general term quality of life will be used when referring to participants’ experiences with holistic well-being and dimensions thereof, consistent with the language used in the Work-Related Quality of Life Scale (WRQoL). Peruniak (2010) offers a relatively simple operational definition that will guide the conceptualization of quality of life in this literature review. He defines quality of life as a subjective construct with a focus on the mutuality of contexts within and surrounding a person’s holistic wellbeing (Peruniak, 2010; pp. 12-13).
Holism

Peruniak states that generally, holism means to understand someone fully and includes understanding the parts of the person and within the context of the whole (including systems and environment) (Peruniak, 2010; pp. 76-101) (see figure 1).

Figure 1. Model of the Realms of Quality of Life (Peruniak, 2010, p. 58)

The word *holism* originates from the Greek word holos, which means “all, whole, and entire life” (Pieterse, 1999). Holism is a central concept in Adlerian Psychology, indicating how a person is best understood within the contexts of the whole self. The Adlerian concept of holism places emphasis on the notion that a person cannot be adequately understood in separate parts. All aspects of a person should be understood that the self exists within systems, so to understand the self, we must understand the whole (Carlson & Englar-Carlson, 2017; Maniaci, Sackett-Maniaci, & Mosak, 2014).

Adlerian Psychology is based on a phenomenological, holistic understanding of human life and wellbeing (Carlson & Englar-Carlson, 2017). Adlerian helping professionals focus on holism. They understand that as a person moves through life, they
always are living within the contexts of their social, ecological, and natural systems. Adlerian Psychology suggests that the person and the whole are inextricable (Carlson & Englar-Carlson, 2017). Within this conversation, there are three life tasks that all people must face; work, love, and community. These life tasks are not considered separate; instead, parts of the whole related to one another and also the environment (Adler, 1930). Adler (1930) theorized that a person’s work-life is inseparable from a person’s holistic quality of life (Stoltz & Apodaca, 2017).

The ideas of holism and attending to the needs of contemporary workers both fit within the general framework posed by Peruniak (2010) in *A Quality of Life Approach to Career Development*. Peruniak (2010) states that although there is substantial literature on quality of life, there has been a lack of research beyond just person-environment fit and classical career development models. He suggests a need and for a constructivist orientation where the concepts of holism, ecosystems, and quality of life are examined within the realm of career development (pp. 35-54).

Peruniak (2010) states that one of the main goals in career development is to help make work and life better for clients and their communities (Peruniak, 2010, p. 3). Nevertheless, quality of life as a construct has been seemingly overlooked in career development literature. Peruniak (2010) states that a Quality of Life Approach to Career Development is integrative and overlaps with many other holistic models of helping (pp. 3-32). For this study, A Quality of Life Approach to Career Development will be used, along with other holistic approaches to career development including; Adlerian Psychology, Social Cognitive Career Theory, and Ecopsychology. The investigator is
approaching this study with an understanding that work, in all of its intricacies, is inseparable from a person’s general wellbeing (Blustein, 2001; Blustein, Kenna, Gill, & Devoy, 2008; Peterson & Gonzalez, 2005). When conceptualizing a person’s holistic wellness, it is important that all individual factors are viewed within the context of a person’s environment, and an ecological paradigm is used (Bronfenbrenner, 1999; Myers & Sweeney, 2004). There is a need for a meta-approach to meet the career needs of contemporary workers, including holistic factors of career development in diverse groups based on Adlerian concepts of social connection, survival, and relatedness (Stoltz & Apodaca, 2017; Sweeney, 2019). These theories are complimentary of Social Cognitive Career Theory (SCCT), which is an excellent career development model to understand the complex relationship between a person, behavior, environment and quality of work life (Andersen & Vandehey, 2012, p. 87-93). Lent and Brown (2006) have previously mentioned that work environment and ecological influences are linked directly job satisfaction and quality of work-life. People often report their general satisfaction at work to be reflective of the feelings they have toward general quality of life. In addition, research on wellness within the context of work has been developing and evolving in recent years (Chessman, 2015; Largo-Wright et al., 2011).

**Quality of Work-Life**

The idea of Quality of Work-Life was first discussed at an international labor relations conference in 1972 (Gayathiri, Ramakrishnan, Babatunde, Banerjee, & Islam, 2013). Currently, there is not a broadly accepted definition of Quality of Work-Life (QoWL). However, in a general sense, it has been defined as the extent to which an
employee feels holistic wellbeing and satisfaction in life, in relation to their participation in the workplace (Swamy, Nanjundeswaraswamy, & Rashmi, 2015). There are certain elements that are usually considered when measuring a person’s QoWL including: work quality, perceived well-being, employee relationship quality, working environment, work-life balance, and perceived control (Gayathiri et al., 2013; Korunka, Hoonakker, & Carayon, 2008; Van Laar, Edwards, & Easton, 2007). Quality of work-life (QoWL) refers to the spirit of a person’s work-related wellbeing. There are six main predictors of QoWL: job and career satisfaction, working conditions, general wellbeing, home-work interface, stress at work, and control at work (Easton & Van Laar, 2012).

It has been said that most American adults spend at least half of their waking hours at work (Pinkstaff, McNeil, Arena, & Cahalin, 2017). This is a significant and measurable portion of our lives that are spent at work (Pinkstaff et al., 2017). In the United States, work can be a significant source of stress. It seems that work environments continue to become more stressful as workplace atmospheres are pressurized and industrialized. In recent years, Americans have experienced a decrease in work-life balance along with decreased autonomy and job security (American Institute of Stress, 2019; APA, 2011). In fact, studies have confirmed that workplace pressure has been a major detriment to the overall wellbeing of U.S. workers. There have been reports that showed nearly 55% of U.S. workers experience stress daily, one out of four U.S. workers are at risk of burnout, 83% of workers report job related stress, and only 57% of workers report feeling satisfied with their home and work-life balance (American Institute of Stress, 2019; APA, 2011). There are many working populations that experience work
related quality of life issues. One population that is prone to decreased quality of work-life is student affairs professionals (Chessman, 2015; Marshall, Gardner, & Hughes, 2016; Renn & Jessup-Anger, 2008; Rosser, 2005; Tull, 2006).

**Quality of Work-Life among Student Affairs Professionals**

The field of student affairs is a relatively new one. Initially, university administrators and faculty were the primary contacts for students to obtain support (UNESCO, 2002). After World War II, campuses became more diverse and student populations on campuses grew quickly. Between WWII and the present, the Student Affairs profession was organized. It became an official career path in the 1990s (UNESCO, 2002). Student Affairs is a division of student support in higher education. The profession was designed to support students in their growth and development. The field of student affairs is diverse and in a constant state of flux (Arvidson & Baier, 2003; Chessman, 2015). Therefore, an increased focus has been placed on the quality of work-life for this population. There have been various themes identified in recent research. These themes include: turnover, job satisfaction, stress, burnout, and home-work interface issues (Chessman, 2015; Marshall, Gardner, & Hughes, 2016; Renn & Jessup-Anger, 2008; Rosser, 2005; Tull, 2006). The section below highlights contemporary research on quality of work-life issues among student affairs professionals.

In the United States, there has been a gap in literature on the understanding of well-being and quality of work-life among student affairs professionals. In response to this gap, Chessman (2015) studied a large sample of student affairs professionals (n=2414) utilizing the WQRoL survey (quality of work-life) and Brief Inventory of
Thriving (wellbeing) to examine work factors in relation to wellbeing in this population. The study found that there was a strong correlation between quality of work-life and general wellbeing in this sample (Chessman, 2015). It also found that stress at work and overall quality of work-life scores were significant predictors of the participants’ wellbeing score. They also found that quality of work-life influenced one’s general wellbeing, with 37% of the total variance in wellbeing being accounted for by the quality of work-life variables (Chessman, 2015).

**Turnover**

Turnover continues to be a pressing issue in the field of student affairs. It has been found that 50–60% of student affairs professionals report leaving the field within the first five years of their careers (Marshall et al., 2016; Renn & Jessup-Anger, 2008; Tull, 2006). In recent studies, it has been noted that the attrition rate in the student affairs profession is on the rise (Marshall et al., 2016; Rosser & Javinar, 2003). Several research studies that have pointed to job dissatisfaction, decreased quality of work-life variables, burnout, and environmental issues as reasons to leave the field (Marshall et al., 2016; Renn & Jessup-Anger, 2008; Rosser, 2005; Tull, 2006). In a recent study of NASPA and ACPA professionals who exited their student affairs career in the last ten years, it was found that the core themes surrounding student affairs professionals’ decision to leave could be identified in seven themes, including stress, burnout, low salary, appealing alternative career paths, and seeking more traditional work hours (Marshall et al., 2016). Most of the themes identified in Marshall et al.’s (2016) study point to quality of work-life issues being the primary cause for turnover. It is evident in the research that the
quality of work-life factors are a concern for this population. In many cases, quality of work-life issues result in individuals leaving their careers in pursuit of alternative career paths. This is problematic, as student affairs professionals are a highly educated group of individuals that provide vital support services to students in need. Without these professionals, institutions are at risk of lacking adequate service for students. In addition, turnover is expensive and can be taxing on organizations. As stated previously, there are several reasons for turnover in student affairs. Some repeated themes that show in the literature are; job satisfaction, stress, and home-work life balance. A review of literature surrounding these themes will be addressed in the following sections.

**Job Satisfaction**

Several studies have pointed to job dissatisfaction as one of the core reasons student affairs professionals choose to leave their career (Marshall et al., 2016; Renn & Jessup-Anger, 2008; Rosser, 2005; Tull, 2006). From a holistic view, job satisfaction is related to a person’s overall quality of life (Chessman, 2015; Diener et al., 2002). Tseng (2004) conducted a meta-analysis of 125 studies related to job satisfaction in student affairs professionals. The study reviewed relationships between student affairs professionals' job satisfaction and various characteristics related to roles, demographics, characteristics of the institution, personal variables, and stress. They found factors that negatively impacted Student Affairs professionals’ job satisfaction included role ambiguity, conflict, and job-related stress. Additionally, factors that positively impacted job satisfaction included positive leadership, job responsibilities, and career commitment (Tseng, 2004).
In addition, Rosser and Javinar (2003) found that the longer midlevel student affairs professionals stayed in their positions, the lower their morale. They also reported that the results of their show that quality of work-life issues such as satisfaction play a significant role in student affairs professionals’ morale (Rosser & Javinar, 2003). Working conditions were also mentioned, however, it should be noted that no direct mention of nature exposure or relatedness was included in this study. Rosser and Javinar (2003) stated that student affairs professionals’ perceptions of work-life had a significant impact on their satisfaction and morale. The authors encouraged future research of holistic factors impacting job satisfaction by stating that the research community “would be well served by continuing to conduct a comprehensive examination of student affairs leaders’ work lives, thereby enhancing the satisfaction and morale of student affairs leaders, and thus influencing them to remain and to better serve our students” (Rosser & Javinar, 2003).

**Stress and Burnout**

Employees working in higher education settings generally report high levels of stress at work (Fontinha, Van Laar, & Easton, 2016; Johnsrud & Rosser, 2002; Tytherleigh et al., 2005). Researchers have found in a recent study of 9,740 higher education employees in the UK that reported levels of general stress was either high or very high, with 33% of respondents reporting their levels of stress as unacceptable (Court & Kinman, 2008). Not surprisingly, relationships have been found between work-related stress and negative consequences for both employees and organizations of higher education, including turnover, substance abuse, poor work relationships, poor
communication, and psychological distress (Court & Kinman, 2008; Earnshaw & Cooper, 2001; Edwards et al., 2009; Jones & Bright, 2001; Kinman et al., 2006; Worrall & Cooper, 2006). Higher education professionals report stress as a work-life factor across the globe, with research showing similar results in Australia, the United Kingdom, and the United States (Johnsrud & Rosser, 2002; Mark & Smith, 2012; Martin, 2008).

Gillespie, Walsh, Winefield, Dua and Stough (2001) found that university faculty and administrators shared similar experiences with regard to workplace stress despite their differences in job responsibilities. All of the participants in this study reported feeling that stress impacted their lives both at home and at work, and many participants reported stress having a negative impact on both their job performance and their home lives (Gillespie et al., 2001). Through a review of literature related to work-life and satisfaction among faculty, Rosser (2005) identified several factors that have contributed to faculty members’ quality of working life, including work and productivity, professional development, relationships with other faculty members, administrative support, salary, tenure and promotion.

Student affairs professionals frequently report stress and burnout as contributors to dissatisfaction with their job (Mullen, Malone, Denney, & Santa Dietz, 2018; Tull, 2006). Mullen et al. (2018) found in a recent study of 789 student affairs professionals, that although most reported low burnout and stress, 21% of the sample still reported moderate to high burnout symptoms. The authors of this study also found promising results in job satisfaction overall but also found that job stress and burnout were predictors of intentions to leave the profession. In addition, they found that participants
with higher stress were more likely to be dissatisfied with their occupation (Mullen et al., 2018). The authors of this study suggested future research should focus on quality of work-life, self-care, and work-life balance (Mullen et al., 2018). All of these recommendations are considered in the current study.

**Work and Home Life Interface**

One important element to consider in the discussion surrounding quality of work-life for student affairs professionals is that of work-life balance. Work-life balance is a broad term, however it is generally considered as an individual’s perception of how they manage multiple home-life roles, satisfaction in those roles, fulfillment, salience between roles, and subjective control in work and home life (Beauregard & Henry, 2009; Kalliath & Brough, 2015; Wilk, 2013). Wilk (2013) conducted a recent qualitative study on the work-life experiences of administrators (n=32) in higher education. The researchers found that this population reported a low work-life balance. In addition, over half of the participants reported finding difficulty in balancing both their work and home life responsibilities. Many professionals reported that technology caused a blurring between work and home life (Wilk, 2013). The researchers recommended that perhaps the use of technology and its role in decreasing elements of perceived work-life balance has been explored in other studies as well.

Research on holistic views of quality of work-life specifically for higher education professionals remains relatively sparse (Chessman, 2015; Johnsrud, 2002). While there have been several research studies conducted on individual factors (e.g., stress) there are still gaps in research (Jyoti, 2010). For example, more research is needed
to take a broader view of QoWL (Jyoti, 2010), with an important factor being nature in relation to wellbeing (Reese & Myers, 2012). The concept of QoWL is helpful for both organizations and helping professionals in understanding how to increase the general satisfaction of employees, resulting in benefits for institutions of higher education (Swamy et al., 2015). By understanding research related to student affairs professionals’ quality of work-life, one can help gather appropriate actions for institutions and helpers to support those who are experiencing diminished quality of work-life.

While there have been some empirical studies on higher education professionals’ wellbeing along the dimensions of job satisfaction, life satisfaction, subjective wellbeing, and holistic wellbeing (Chessman, 2015; Edwards et al., 2009) to date, it appears that there are no empirically based studies on the effects of nature relatedness on quality of work-life for this population. Although career development models have placed emphasis on human factors, the missing component in contemporary career development literature is surrounding people’s connection with nature and the Earth (Peruniak, 2010; pp. 147-150). In A Quality of Life Approach to Career Development Peruniak (2010) postulates that links between nature and career development have been largely unexamined (p. 149), yet it is broadly understood that nature relatedness is an important part of a discussion about quality of life. The current study is intended to bridge the gap between career development and Ecopsychology, with a focus on quality of work-life specifically.

**Work-Related Quality of Life Scale for Student Affairs Professionals**

Over the years, research has been conducted on university professionals’ quality of work-life. Research to date have focused on the dimensions of rewards and salary,
career satisfaction, relationships, and job security (Johnsrud & Rosser, 2002; Rosser, 2005). In addition, studies have shown that university faculty and staff experience stress and frustration (Edwards et al., 2009; Mullen et al., 2018; Pandey & Tripathi, 2001). For example, a recent study in the United Kingdom was conducted examining the quality of work-life in higher education professionals (n=2136). It was found that higher education employees in this sample were generally dissatisfied with their work, working conditions, perceived control at work, and reported feeling stressed (Edwards et al., 2009). Meanwhile, Jyoti (2010) gathered information about quality of work-life in higher education in North India utilizing the WRQoL scale with instructors at four different universities (n=82). The researcher found that the scale showed high reliability coefficients with this population (a=.89). Their conclusions were that university teachers did not report a very high average score of quality of work-life, with the average score for QoWL being 3.41 on a 5-point scale. The study concluded that most important factors impacting the university teachers included organizational environment, good communication, and physical environment (Jyoti, 2010). It was also found that QoWL, job satisfaction, and job commitment were negatively correlated with intention to leave, which points to the idea that good QoWL might incentivize employees to stay in their jobs longer (Jyoti, 2010). Through these two studies, the WRQoWL Scale proved to be a helpful tool in examining quality of work-life with this population, therefore the WRQoL scale was selected to examine WRQoL variables in the current study.
Conclusion

Despite existing research on the quality of work-life on student affairs professionals, it appears that no studies have examined the relationship between nature relatedness, nature exposure, and quality of work-life with this population. Renn and Jessup-Anger (2008) recommended that it is essential to take a holistic approach to career for student affairs professionals. This study is intended to contribute to the holistic understanding of quality of work-life by adding to the literature in two ways. First, it contributes by examining the relationship between nature relatedness and several elements of quality of work-life in student affairs professionals. Second, it will provide additional insight in regard to the relationship between nature exposure and nature relatedness, and nature exposure and quality of work-life in student affairs professionals. This study integrates nature in the discussion about holistic work-life wellness. In the next chapter, the methodology used in this study are described.
CHAPTER III

METHODOLOGY

Introduction

Chapter III describes the methodology that was used to explore the research questions in this study. This chapter will include a discussion of the purpose of the study, the participants, procedure, instruments, research questions and design, and data cleaning procedures.

Purpose of the Study

The purpose of this study was to examine the relationship between nature relatedness, nature exposure, and quality of work-life among student affairs professionals. Nature relatedness was measured with the Nature Relatedness Scale (NRS; Nisbet et al., 2009), nature exposure was measured by the Nature Exposure Scale (NES; Kamitsis & Francis, 2013), and quality of work-life was measured by the Work-Related Quality of Life Scale (WRQoL; Easton & Van Laar, 2012). The study examined the following three research questions:

RQ1. What is the relationship between nature relatedness (as measured by the NRS), nature exposure (as measured by the NES), and quality of work-life (as measured by the WRQoLS) among student affairs professionals?

RQ2. Does nature relatedness (as measured by NRS total score) predict quality of work-life (as measured by WRQoLS total score) among student affairs professionals?
RQ3. Does nature exposure as measured by NES total score mediate the relationship between nature relatedness as measured by NRS total score and quality of work-life as measured by WRQoL total score among student affairs professionals?

Participants

The participants in this study included student affairs professionals employed in higher education settings across the United States. They were recruited from the American College Personnel Association (ACPA) through two emails. The ACPA is a major student affairs association headquartered in Washington, D.C., at the National Center for Higher Education (ACPA, 2019). The final sample included 275 professionals who ranged in age between 23 and 72 years old (M=38.49, SD=10.77).

Regarding country of citizenship, the majority of participants, 263 (95.6%) were citizens of the United States, seven (2.5%) were ACPA members not affiliated with the United States, and five (1.8%) did not indicate country of citizenship. In regard to gender identity, most of respondents 166 (60.4%) identified as woman/female/feminine, 81 (29.5%) identified as man/male/masculine, 12 (4.4%) as gender non-conforming or gender-queer, three (1.1%) as transgender man/male/masculine, and 13 (4.7%) did not provide a response.

The majority of participants 211 (76.7%) identified as White, Caucasian, or European American while 25 (9.1%) participants identified as African American or Black, 11 (4.0%) identified as Multiracial or Biracial, 7 (2.5%) as Asian or Asian American, 5 (1.8%) as Hispanic or Latina or Latino, 2 (0.7%) individuals who listed two
or more races, and 3 (1.1%) identified as Native Hawaiian or Pacific Islander. However, 11 (4.0%) did not provide a response.

Regarding the work and life demographics of the participants, sixty-eight (24.7%) reported being new professionals, 109 (39.6%) indicated that they were mid-level professionals, and 98 (35.6%) identified themselves as senior-level student affairs professionals. One hundred (36.4%), participants reported living in Suburban areas, 78 (28.4%) lived in Urban Small Cities, 53 (19.3%) participants lived in Urban Metropolitan areas, and 44 (16%) participants lived in rural areas. The participants worked an average of 46.75 hours per week (M=46.75 SD=8.43), with a range of 22-94 hours per week. One-hundred and seventy-six (64%) participants reported that their workweeks followed a “standard schedule,” and 99 (36%) reported having a “non-standard workweek.”

Sample Size

To determine power and sample size, the type of statistical analysis used, the directionality of the test, and the alpha level was considered (Heppner et al., 2016). Regarding the type of statistical analysis used, the current study included a Pearson Product Moment (r) correlation matrix and a simple linear regression. Due to the exploratory nature of this study, the directionality of the test was two-tailed. In addition, procedures were followed to avoid Type I and Type II Errors. Type I Errors occur when a conclusion is made that a significant relationship exists when in reality, there is not a relationship between variables (Heppner et al., 2016). To control for Type I Error, the significance level (alpha) was set to .05 (Heppner et al., 2016).
Type II errors occur when a conclusion is made that there is no statistically significant relationship when in fact one exists (Heppner et al., 2016). In order to address Type II error, the power was set at .80, and the effect size at .30 for a medium effect. These levels are consistent with typical social science research (Heppner et al., 2016). In addition, Green’s (1991) guidelines for sampling procedures in regression analysis were referenced to determine a robust sample size to protect against Type II errors. Green (1991) suggested the formula $N>50+8m$ for testing multiple correlations and $N>104+m$ for individual predictors, at 80% power to determine the appropriate sample size (Green, 1991; Wilson VanVoorhis & Morgan, 2007). For this study, based on a regression analysis for RQ2 and RQ3, it was found that there was a total of two predictor variables. Therefore, based on Green’s (1991) equations, a minimum sample size for the study was 66 participants, while a more conservative sample size of 106 participants would be ideal for this study. The final sample size for this study was $n=275$.

**Procedure**

After the dissertation proposal was approved, the study was submitted for approval by the Minnesota State University, Mankato Institutional Review Board (IRB). After receiving IRB approval (see Appendix D), a Qualtrics survey was developed that included a consent form (see Appendix A), a demographic survey (See Appendix C), the Nature Relatedness Scale (See Appendix E), the Nature Exposure Scale (see Appendix F), the Work-Related Quality of Life Scale (See Appendix G), and an optional link to a random drawing for one of two $25 Amazon gift cards.
The email and the consent form provided the participants with the contact information of the principal investigator and the student investigator, so they had the necessary contact information if they had questions. The consent form informed participants that participation is voluntary and that their responses remained anonymous. The consent form also included information about the potential risks and their rights as participants. In addition, they were informed that their collective responses to the Work-Related Quality of Life scale would be forwarded (without identifying information beyond “University Professionals in the United States”) (see Appendices A, F, and H) to the original Work-Related Quality of Life scale author Van Laar to further validate the Work-Related Quality of Life scale (e.g., updating norms, creating benchmark datasets).

Through the consent form, the participants were informed that the survey was likely to take 15-20 minutes to complete and that they would be given the option at the end of the survey to submit their contact information for a random drawing for one of two $25 Amazon gift cards. The adjacent screen for the drawing was not attached in any way to the preceding survey questions or demographic questionnaire.

ACPA agreed to distribute the survey after IRB approval was received. Accordingly in October 2019, the organization emailed an introductory email (See Appendix B) to a list of its current members. A follow-up email was sent one week after the initial survey request. After the survey had been open for a total of three weeks, the data from the survey was downloaded from Qualtrics and cleaned in IBM SPSS 25.

There was a separate Qualtrics survey created for the drawing. Participants had the option to submit their name and email/phone number to participate in the drawing,
and participation was optional. The data from the second survey was downloaded and randomized using Excel. Two winners were selected at random using the Excel [fx RAND=(values)] function and were then contacted via email. After they accepted their prize, they were each sent a $25 Amazon gift card electronically. The data that was downloaded as a part of the random drawing were destroyed after the drawing was held.

**Instruments**

The three inventories used in this study were the Nature Relatedness Scale (NRS) (Nisbet et al., 2009), the Nature Exposure Scale (NES) (Kamitsis & Francis, 2013), and the Work-Related Quality of Life scale (WRQoLS) (Easton & Van Laar, 2012). Each instrument is described in further detail below. In addition, information about the demographic questionnaire is discussed.

**Nature Relatedness Scale.** The Nature Relatedness Scale (NRS; Nisbet et al., 2009) (Appendix E) measures the affective, cognitive, and experiential elements of a person’s connectedness with nature (Nisbet et al., 2009). It was designed to measure how an individual connects with nature on three dimensions; emotional, cognitive, and physical (Nisbet et al., 2009). It is a 21-item assessment, in which participants rate the extent to which they agree with Likert style statements, ranging from [1] disagree strongly to [5] agree strongly, based on how they ‘really feel’ in relation to nature.

The NRS includes three subscales which are NR-Perspective, NR-Self, and NR-Experience. The NR-Perspective subscale measures a person’s external worldview about their relationship with nature including their awareness that human behaviors affect the Earth (e.g., “the state of nonhuman species is an indicator of the future of humans”). NR-
Self subscale measures a person’s internal perspective about their relationship with nature and identification with nature. NR-Self represents one’s feelings and thoughts about their connectedness with nature (e.g., “I am not separate from nature but a part of nature.”) NR-Experience subscale represents a person’s physical familiarity with nature (e.g., “I enjoy being outdoors”) (Nisbet et al., 2009).

The authors of the scale Nisbet et al. (2009), reported that the NRS scale showed solid reliability with an alpha (\(\alpha=0.87\)) and subscale validity of NR-Perspective (\(\alpha=0.66\)), NR-Self (\(\alpha=0.84\)), and NR-Experience (\(\alpha=0.80\)). The scale also showed good test re-test reliability after six months of (\(r=0.85\)).

In addition, there are several global studies that have included the NRS scale, showing promising cross-cultural applications. In a study with Spanish speaking participants in Madrid, Spain (n=321) to analyze the construct validity of the Connectedness with Nature Scale (Pasca, Aragonés, & Coello, 2017), the researchers conducted a reliability analysis between the CNS and the NRS-21, which resulted in high convergent validity (\(r = 0.60, p < 0.01\)) (Pasca et al., 2017). Results for students in Hong Kong (n=322) were similar to those found in students from the United States (n=185), and although this wasn’t a primary focus of Tam’s study, it does show that the scale might perhaps be valid in different cultures (Tam, 2013). Meanwhile, a study of participants in Brisbane, Australia (n=1538) examined how the NRS varies among socio-demographic groups such as age, gender, working status, and whether or not participants had children (Dean et al., 2018). Overall, this study concluded that nature relatedness was
higher in older people, females, those not working, those without children living at home, and people who were English speakers (Dean et al., 2018).

In the current study, the scale was assessed for reliability and internal consistency values for the full scale and its three subscales were as follows: NR-Total scale (α=.90), NR-Self subscale (α=.86), NR-Perspective subscale (α=.68), NR-Experience subscale (α=.85) indicating that the NRS scale and its subscales have good internal consistency.

**Nature Exposure Scale.** The Nature Exposure scale (NES; Kamitsis & Francis, 2013) measures exposure to nature both in and outside of everyday life (Appendix E). It is a four-item assessment containing four 5-point Likert style statements which indicate either higher or lower levels of exposure to nature. The total possible score on this assessment is 20 and the lowest possible total score is 4. In addition, there are two dimensions in which the participants rate their exposure to nature: excursions and everyday life. The NES is intended to measure a participant’s physical exposure to natural settings (Kamitsis & Francis, 2013).

In their initial study, the scale developers found that the NES had an acceptable level of internal reliability with a Cronbach’s alpha of α=.73 (Kamitsis & Francis, 2013). Furthermore, in a later study, the scale items had adequate common variance for factor analysis (KMO=0.89), and acceptable internal consistency coefficients for women (α 0.70), and men (α=0.72) (Swami, Barron, Weis, & Furnham, 2016). In the current study, the NES total score ranged between 4-20 (M=13.89, SD=3.07), and was found to have good internal consistency with a Cronbach’s alpha of α=.73.
Work-Related Quality of Life Scale (WRQoLS). The Work-Related Quality of Life scale (WRQoLS: Easton & Van Laar, 2012) was developed to assess overall quality of work-life (Appendix F). The development of the WRQoL scale was based on a review of contemporary research and assumptions that people have basic needs fulfilled through work and life, and that job-related stress and burnout have negative influences on one’s general wellbeing and vice versa (Easton & Van Laar, 2012). The scale consists of 23 items that are measured based on 5-point Likert style statements ranging from [1] Strongly Disagree to [5] Strongly Agree. The WRQoLS includes 23 Likert-style items divided into six subscales. The six subscales are Job and Career Satisfaction (JCS), General Wellbeing (GWB), Stress at Work (SAW), Control at Work (CAW), Home-Work Interface (HWI), Working Conditions (WCS). The WRQoL scale has been evaluated for measures of internal reliability and consistency. The WRQoL total scale was found to have an excellent Cronbach’s Alpha value of $\alpha=.94$ (Edwards et al., 2009).

The JCS subscale has a total of six items. It was designed to measure participants’ feelings of achievement, self-esteem, and potential within their current work environment. It was found to have very good reliability ($\alpha=.86$) (Easton & Van Laar, 2012). In the current study, the subscale showed good internal reliability and internal consistency ($\alpha=.79$).

The GWB subscale has a total of six questions. It was designed to measure participants’ feelings of life satisfaction and psychological wellbeing. It has very good reliability ($\alpha=.89$). In the current study, the subscale showed good internal reliability and internal consistency ($\alpha=.89$).
The SAW subscale has a total of two items. It was designed to measure participants’ perceptions of the feelings of excessive pressure and stress at work. It has very good reliability ($\alpha=.81$). In the current study, the subscale showed good internal reliability and internal consistency ($\alpha=.83$).

The CAW subscale has a total of five items. It was designed to measure the level in which an employee feels they can exercise control at work. The scale developers found that it had very good reliability of ($\alpha=.81$). In the current study, the subscale showed good internal reliability and internal consistency ($\alpha=.82$).

The HWI subscale has a total of three items and was designed to measure the extent to which an employee perceives home-life balance. According to the scale developers, it has a very good reliability of ($\alpha=.82$). Meanwhile, in the current study, the subscale demonstrated good internal reliability and consistency ($\alpha=.75$).

The WCS subscale has a total of three items. It was designed to measure employees’ satisfaction with their working resources, conditions, and security. The subscale demonstrated good reliability ($\alpha=.79$). In the current study the subscale showed good internal reliability and consistency ($\alpha=.77$).

**Demographic Information.** Previous researchers have identified various socio-demographic variables that influenced one’s relationship with nature such as gender, cultural background, age, and life stage (Dean et al., 2018; Richardson & Mitchell, 2010; Whiteford et al., 2010). It was recommended that future researchers pay diligent attention to differences among diverse social groups in nature relatedness research. Therefore, the current study collected demographic information about the participants (Appendix C).
These included seven demographic variables including race/ethnicity, gender, age, average hours worked weekly, level of employment (ACPA designations), work week pattern, and residential environment. Standards provided by the ACPA were used to create the demographic survey.

**Research Questions and Design**

This section includes the research questions included in this study along with the research designs used to address the questions. According to Heppner et al. (2016), the purpose of a research design is to develop a plan for study to more fully understand a construct. The primary purpose of this study is to explore the relationship between nature relatedness, nature exposure, and quality of work-life in student affairs professionals. A descriptive design allows a natural observation of the relationship between variables where there is no manipulation or control of the variables. Therefore, a descriptive design is the most appropriate approach to answer the research questions (Heppner et al., 2016).

**RQ1.** What is the relationship between nature relatedness (as measured by the NRS), nature exposure (as measured by the NES), and quality of work-life (as measured by the WRQoLS) among student affairs professionals?

**H0:** There are no relationships between the subscales of nature relatedness, nature exposure, and quality of work-life among student affairs professionals.

**Hₐ:** There are relationship(s) between the subscales of nature relatedness, nature exposure, and quality of work-life among student affairs professionals.

Research Question 1 (RQ1) is focused on the relationship between the core three variables in the study: nature relatedness, nature exposure, and quality of work-life
among student affairs professionals. To examine the relationship between the subscales of nature relatedness, nature exposure, and quality of work-life among student affairs professionals, a correlation matrix was used. The Pearson Product Moment ($r$) correlational matrix included the pairing of the ten variables; three nature relatedness variables, one nature exposure variable, and six quality of work-life variables.

A correlational design includes the correlation coefficient $r$, which represents the strength and direction of the relationship between variables (Heppner et al., 2016). All three nature relatedness subscales, the total nature exposure scale score, and the six quality of work-life subscale scores were analyzed in the matrix. The Pearson’s product-moment correlations ($r$) provided an estimate of the magnitude and direction of the relationship between nature relatedness, nature exposure, and quality of work-life variables (Heppner et al., 2016). The Pearson ($r$) correlation coefficient can have a range of -1 (very small) to +1 (very large) (Heppner et al., 2016; Morgan, Leech, Gloeckner, & Barrett, 2011).

In order to use a Pearson’s Product Moment ($r$) correlational matrix, certain assumptions must be met. The core assumptions in using a correlation analysis are outlined by Morgan et al. (2011). The core assumptions are: 1) linearity; the two variables have a linear relationship, 2) normality; the scores are normally distributed, and 3) outliers; the absence of extreme scores which can skew the results of a correlation analysis (Morgan et al., 2011). To address RQ1, the data were imported from Qualtrics to the IBM Statistical Package for Social Sciences (SPSS) 25 for analysis. The data were
cleaned, checked for accuracy, tested for assumptions and then analyzed using a Pearson’s $r$ correlation matrix for RQ1.

**RQ2.** Does nature relatedness (as measured by NRS total score) predict quality of work-life (as measured by WRQoLS total score) among student affairs professionals?

$H_0$: There will be no significant prediction of work-related quality of life (total score) by nature relatedness (total score) for student affairs professionals.

$H_a$: There will be a significant prediction of work-related quality of life (total score) by nature relatedness (total score) for student affairs professionals.

In order to address RQ2, a simple linear regression was selected to determine if nature relatedness was a good predictor of work-related quality of life. A simple linear regression is a statistical analysis that allows the researcher to study the relationship between two continuous variables, where the independent variable is known as the predictor variable and the dependent variable is known as the criterion variable (Cohen, Cohen, West, & Aiken, 2015). In the current study, the independent or predictor variable was the nature relatedness total score, the dependent or criterion variable was the work-related quality of life total score. Linear regression analysis can result in a positive, negative, or no relationship. In a simple linear regression, an $F$ test is used to examine the statistical significance of the relationship between the independent and dependent variable (Balkin & Kleist, 2017). The regression coefficient ($R^2$) can have a range of 0 to 1, depending on the strength of the relationship (Balkin & Kleist, 2017). To address RQ2, after the data were imported from Qualtrics to the IBM Statistical Package for Social Sciences (SPSS) 25 for analysis. The data were tested for the four assumptions needed
for simple linear regression and then analyzed using a simple linear regression model, which will be covered in the next section.

**RQ3.** Does nature exposure as measured by NES total score mediate the relationship between nature relatedness as measured by NRS total score and quality of work-life as measured by WRQoL total score among student affairs professionals?

**H₀:** Nature exposure (NES total score) will not mediate the relationship between nature relatedness (NRS total score) and quality of work-life (WRQoL total score) among student affairs professionals.

**H₁:** Nature exposure (NES total score) will mediate the relationship between nature relatedness (NRS total score) and quality of work-life (WRQoL total score) among student affairs professionals.

To examine the relationship between the nature relatedness, nature exposure, and quality of work-life, a hierarchical regression would have been used, specifically, mediation analysis. Hierarchical regression is used to test how the mediator variable explains the relationship between a predictor variable (nature relatedness) and a criterion variable (quality of work-life) (Baron & Kenny, 1986; Heppner et al., 2016). A mediating variable is used to describe the *how* and *why* one variable predicts another variable (Heppner et al., 2016). In this question, the mediator variable was the nature exposure total score of the participants, the predictor variable is the NRS total score and criterion variable is the WRQoL total score. RQ3 was only to be addressed if a statistically significant relationship was found in research question two. In the current study, no
statistically significant relationship was found between nature relatedness and quality of work-life, so the mediation analysis was not conducted for RQ3.

**Data Screening**

After the data were downloaded to IBM SPSS 25, it was screened for errors and cases with missing values were removed. The data were then checked for assumptions. Data cleaning guidelines provided by Tabachnick and Fidell (2019) and Morgan et al. (2011) were used to consider potential issues before analyses were run. These guidelines included inspecting data for accuracy of input, evaluating missing data, and checking for assumptions. In order to check for accuracy, the data output was proofread against the original questionnaires and checked for accuracy. The data collected from the surveys and the original questionnaires proved to be consistent with one another and no errors were found. The data was then screened for missing values by using IBM SPSS 25 descriptive statistics. The details surrounding missing data are discussed in the next section.

The analysis for Research question one (RQ1) was a Pearson’s Product Moment ($r$) correlation matrix. There are four assumptions that must be met when using this statistical analysis. These included continuous variables, linearity, normality and the absence of outliers (Morgan et al., 2011; Tabachnick & Fidell, 2019). Meanwhile, the analysis used for Research question two (RQ2) included a simple linear regression equation. There are four assumptions associated with a linear regression analysis which include linearity, normality, homoscedasticity, and the variables are independent from one another. The following paragraphs will describe the data cleaning procedures as well
as the procedures for checking all assumptions for RQ1 and RQ2, including 1) missing data, 2) appropriateness of variables, 3) normality and outliers, 4) linearity and homoscedasticity.

**Missing Data**

Data were screened for missing values using IBM SPSS 25. Guidelines provided by Tabachnick and Fidell (2019) were used to delete cases with missing values. There were 347 participants who logged into the Qualtrics survey, and the missing data analysis showed that 61 participants exited the survey before completing it. As these participants failed to complete the entire survey, they were removed from the analysis using case wise deletion, leaving a total sample of N=286. In an analysis of missing data, nine cases were identified that were missing data and were removed from the total sample, resulting in a total final sample of n=275.

**Appropriateness of Variables**

Based on the nature of the analysis, here were two assumptions required for both RQ1 and RQ2. In order to use a Pearson Product Moment (r) correlation matrix and a simple linear regression for RQ1 and RQ2, the variables must be independent from one another and be continuous in nature. Variables can be discrete or continuous (Balkin & Kleist, 2017). Discrete variables are categorical in nature whereas continuous variables include a score or measure (Balkin & Kleist, 2017). The variables included in analysis of RQ1 and RQ2 were all continuous scale scores, therefore it was determined that they were appropriate for the statistical analyses used in this study.
**Outliers**

Data were screened for normality and outliers using guidelines provided by Tabachnick and Fidell (2019) and Morgan et al. (2011). Outliers are data points that do not fit with the rest of the data and fall either high or below the general data set (Cohen et al., 2015). Variables can be assessed either by statistical or graphical methods (Tabachnick & Fidell, 2019). First, the variables were assessed for outliers through visual inspection of stem and leaf plots and histograms via the IBM SPSS 25 output. Outliers were identified for the NR-Perspective subscale and one outlier was identified for the NR-Self subscale. However, both scales were within normal ranges for skewness and kurtosis and resembled a normal distribution on the corresponding histograms. In addition, four outliers were identified on the NES total scale (participants who scored the lowest possible score “4” on a scale of 4-20). The outlier scores were within the normal scale range, and there were no obvious signs that the data were entered incorrectly, therefore was not due to a measurement error. According to Cohen et al. (2015), outliers due to undetected errors in the data set are problematic (e.g., entering “6” instead of “60,000” in SPSS) for salary. The outliers in this study were not due to an error in data entry and appeared to be due to natural variation in participant responses.

Cohen et al. (2015) stated that threats made by one or two outliers typically decreases with an adequate sample size, in addition, if other conditions (such as collinearity and normality) are met, the impact of outliers decrease. In this case, the scales met assumptions for normality and collinearity (discussed below), and all scales had good Cronbach’s Alpha levels. In addition, the overall variance on a 5-point Likert
scale is small, and the outliers did not drastically affect the mean of the results. It is likely that the outliers found in this sample were due to a natural variability in the participants’ responses, which is not uncommon in observational research. The outliers found in this study were valid scores from the participants, and fairly represented their reported experiences (Salkind, 2010). Salkind (2010) stated that there are multiple valid approaches to dealing with outliers in social science research. One approach for dealing with a one or two outliers in observational data is to retain the observed values, in order to minimize risk of misrepresenting the population. For this study, the outliers remained in the general data set to maintain the integrity of the results, and to protect the representativeness of the sample.

**Normality**

Next, the variables were evaluated for normality. Normality was assessed through visual inspection of scattergrams. Scattergrams were viewed to identify patterns of skewness and/or kurtosis. Skewness refers to the degree of symmetry of a distribution whereas kurtosis deals with how peaked a distribution is (Tabachnick & Fidell, 2019). Scatterplots of the variables were examined to determine if the data points fell in a normal distribution. All variables appeared to have normal distributions and were within the guidelines for skewness (±1.00) and kurtosis (Morgan et al., 2011), with the exception of the Work and Career Satisfaction (WCS) subscale which had a slight skewness of -1.16 but was within normal guidelines for kurtosis (Morgan et al., 2011). The NR-Perspective subscale (n=275) scale showed skewness of -.40 and kurtosis of -.40, the NR-Self subscale (n=275) scale showed skewness of -.50 and kurtosis of -.17
which were both within acceptable limits (Morgan et al., 2011), and the NR-Experience subscale (n=275) showed skewness of -.35 and kurtosis of -.65. Stem and leaf plots and histograms of these variables were visually inspected for normality and appeared to fit within a normal distribution pattern (Tabachnick & Fidell, 2019). These results demonstrate an acceptable outcome for the assumption of normality (Morgan et al., 2011; Tabachnick & Fidell, 2019).

The NES Total score (n=275) scale showed a skewness of -.81 and kurtosis of .98, both within the acceptable range. Meanwhile, based on the histogram this scale appeared to have normal distribution. Through visual inspection of the histogram, four outliers were identified (all scoring a 4 of 20 on the total scale). The cases were examined, and no abnormalities were found: the outliers remained in the study in order to maintain integrity and representativeness of the participants’ reported experiences in this study.

The histogram for the WRQoL scale revealed the following scores for skewness and kurtosis: a skewness of -.54, a kurtosis of .09 which indicated that scores were normally distributed. The WRQoL CAW subscale (n=275) showed a skewness of -.64 and kurtosis of -.12, the JCS subscale had a skewness of -.41 and kurtosis of -.25, the GWB subscale had a skewness of -.57 and kurtosis of -.07, the HWI subscale had a skewness of-.61 and kurtosis of -.10, the WCS subscale had a skewness of -1.16 and kurtosis of 1.77, the SAW subscale had a skewness of .39 and kurtosis of -.78. Stem and leaf plots and histograms on these variables were visually inspected for normality, and generally appeared to fit within a normal distribution pattern. There were outliers
identified for the GWB, WCS, and HWI subscales. However, the data connected to these cases appeared normal, the results are on a five-point Likert scale, and removing these cases would not be conducive to fairly representing the experiences of the participants. All outliers were included in this study in order to accurately represent the sample.

Q-Q plots were used to examine the subscales for normality and all subscales showed a normal pattern, with variables generally aligning with fit line. The WCS which showed a minor deviation from the Q-Q plot line of fit but was not in the extreme.

**Linearity and Homoscedasticity**

In order to conduct a Pearson Product Moment correlation, certain assumptions such as linearity and homoscedasticity need to be met (Morgan et al., 2011; Tabachnick & Fidell., 2019). Linearity assumes that there is a linear or straight-line pattern in the relationship between variables (Tabachnick & Fidell, 2019). In this study, linearity was assessed by a visual inspection of scatterplots. Points were distributed in a linear pattern on the scatterplots and therefore, the assumption of linearity was confirmed (Tabachnick & Fidell, 2019).

Multicollinearity (correlated, $r > 0.8$) and singularity (nearly perfect correlation, $r > 0.9$) are considered extremely problematic as they can lead to inaccurate results (Morgan et al., 2011; Tabachnick & Fidell, 2019). To ensure the variables in RQ2 (NRS total score and WRQoLS total score) did not exhibit collinearity, SPSS parameters were set to screen the variables for multicollinearity and singularity, and no such relationships were found during the final analysis.
Meanwhile, heteroscedasticity refers to extreme clustering to the right or left of the fit line (Tabachnick & Fidell, 2019). In this study SPSS 25 scatter plots were used to observe for clustering and to see if data points lay on both sides of the line of best fit. Based on visual inspection of P-P plots, it was found that data points generally fell along the fit line of the scatterplots, and no clustering was found. Therefore, the assumption of homoscedasticity was met.

**Conclusion**

This chapter provided a summary of the research design and methodology that was used to examine the relationship between nature relatedness, nature exposure, and quality of work-life in student affairs professionals. The 275 participants in this study responded to a recruitment email distributed by ACPA, which included a consent form, a demographic survey, the Nature Relatedness Scale, the Nature Exposure Scale, the Work-Related Quality of Life Scale, and an additional survey for an optional random drawing. Quantitative data analysis was used in this study. The research plan included a Pearson Product Moment \( r \) correlation matrix for research question one and a simple linear regression for research question two. The next chapter will provide a summary of the results.
CHAPTER IV

FINDINGS

Introduction

Chapter IV provides information about how the data was collected, data cleaning procedures, descriptive statistics, instrument calculation, data analysis, and the results of this study.

The participants in this study included 275 student affairs professionals who were members of the American College Personnel Association (ACPA). They participated in a survey distributed by ACPA which included a consent form, a demographic form, the three instruments used in this study, and an additional survey for an optional random drawing. The data were collected for a total of three months in Fall 2019.

After completion of data collection via Qualtrics, the data were downloaded and cleaned in IBM SPSS 25. Guidelines provided by Tabachnick and Fidell (2019) and Morgan et al. (2011) informed the data cleaning process. The data were cleaned and checked for accuracy in IBM SPSS 25. Following the initial cleaning, the data were tested for assumptions before the statistical analyses were run. Following the data cleaning procedures and checking for assumptions, two statistical analyses were conducted to answer the research questions.

The two test statistics used in this study included a Pearson’s r correlation matrix and a simple linear regression. To conclude this chapter, the results from the 10x10 Pearson’s r correlation matrix for research question one and the results from the simple linear regression for research question two will be discussed.
**Instruments**

The three instruments used in this study were the Nature Relatedness Scale (NRS; Nisbet et al., 2009), the Nature Exposure Scale (NES; Kamitsis & Francis, 2013), and the Work-Related Quality of Life Scale (WRQoLS; Easton & Van Laar, 2012). The scales and subscales scores were calculated in IBM SPSS 25, utilizing the scoring instructions provided by the instrument authors. After the scales and subscales were scored, descriptive statistics were run. This section outlines the scoring procedures and descriptive statistics for each of the scales used in this study.

**Nature Relatedness Scale**

The Nature Relatedness Scale (NRS) measures the affective, cognitive, and experiential elements of a person’s connectedness with nature (Nisbet et al., 2009). It consists of three subscales which are the NR-Perspective, NR-Self, and NR-Experience. It consists of 21 items that are scored on a Likert scale that ranged from [1] strongly disagree to [5] strongly agree. Higher scores represented higher nature relatedness, and lower scores indicated lower nature relatedness. Each of the subscales have their own score and there is total score for the instrument as well.

The instructions provided by the author of the scale were used in the scoring of the Nature Relatedness Scale (NRS) format (Nisbet et al., 2009). To calculate the score for each of the three subscales, the items within the subscale were totaled and then averaged. Items 2, 3, 10, 11, 13, 14, 15, and 18 were reverse (R) coded in SPSS before analyses were run. After reverse coding the required items, computations (SPSS Transform: Compute Variable) were run to compute the NR-total score and three
subscales (NR-Self, NR-Perspective, and NR-Experience); a) NR-Self items 5, 7, 8, 12, 14R, 16, 17, & 21 were summed and then divided by eight to obtain an average subscale score, b) NR-Perspective items; 2R, 3R, 11R, 15R, 18R, 19, and 20 were summed and then divided by seven to obtain an average for the subscale score, and c) NR-Experience items 1, 4, 6, 9, 10R, 13R were summed and then divided by six to obtain the average for the final subscale score. To calculate the NRS total score all 21 items were averaged (after reverse scoring of appropriate items) (Nisbet et al., 2009).

The scale was assessed for reliability and internal consistency in the current study; internal consistency values were as follows: NR Total Scale (α=.90), NR-Perspective (α=.68), NR-Self (α=.86) and NR-Experience (α=.85). These results indicated that the scale and its subscales had a range of acceptable to good internal consistency.

In this study, the NRS Total Score ranged between 1.62 and 4.9 (M=3.58, SD=.65), NR-Perspective ranged between 2.43 and 5.0 (M=4.03, SD=.58), NR-Self subscale ranged between 1.25 and 5.0 (M=3.68, SD=.76), and the NR-Experience subscale ranged between 1.0 and 5.0 (M=3.28, SD=.95).

**Nature Exposure Scale**

The Nature Exposure Scale (NES) is a four-item scale that measures the participants’ exposure to nature in everyday life and activities (Kamitsis & Francis, 2013). It has a minimum total score of four and a maximum total score of 20. A higher scale score indicates a higher exposure to nature in daily life. In addition, there are two subscales available: this first subscale is *exposure to nature in everyday life* (e.g., in your everyday home, travel and work environments and activities, please rate your level of
exposure to natural environments), and the second subscale is excursions (e.g., please rate the frequency of exposure to nature-rich environments outside of your everyday environment). Each subscale has a minimum score of two and a maximum score of ten (Kamitsis & Francis, 2013).

The NES total score was calculated [SPSS Transform: Compute Variable] by using a sum of all four items. The NES total score was calculated by adding items 1, 2, 3, and 4 to produce a total score ranging between four and twenty. In this study, the NES total score ranged between 4-20 (M=13.89, SD=3.07). In the current study, the NES was found to have good internal consistency (α=.73).

**Work-Related Quality of Life Scale**

The Work-Related Quality of Life Scale (WRQoLS) is a 23-item scale that is designed to measure a person’s quality of work-life. The items are divided into six psychological subscales: General Well-being (GWB), Home-Work Interface (HWI), Job and Career Satisfaction (JCS), Control at Work (CAW), Working Conditions (WCS), and Stress at Work (SAW) (Easton & Van Laar, 2012). The three negatively phrased items in the survey, (Items 7, 9, and 19) were reverse coded in SPSS before computations on the six subscales were run. After reverse coding the above items, computations [SPSS transform: compute variable] were run to compute the WRQoL total score, and six subscales (GWB, HWI, JCS, CAW, WCS, and SAW): a) General Well-being (GWB) was calculated by averaging items 4, 9R, 10, 15, 17, and 21; b) Home-Work Interface (HWI) was calculated by averaging items 5, 6 and 14; c) Job and Career Satisfaction (JCS) was calculated by averaging items 1, 3, 8, 11, 18, and 20; d) Control at Work
(CAW) was calculated by averaging items 2, 12, and 23; e) Working Conditions (WCS) was calculated by averaging items 13, 16, and 22; and f) Stress at Work (SAW) was calculated by averaging items 7R and 19R.

The General Wellbeing (GWB) subscale, which includes six items is used to measure participants’ general feelings of home and work-life balance and whether or not the employer seems supportive of a person’s home life (Easton & Van Laar, 2012). The score on this subscale can range between 1-5. In the current study, the participants’ scores ranged between 1 and 5 (M=3.58, SD=.83). The subscale demonstrated good internal reliability and internal consistency (α=.89).

Home-Work Interface (HWI) is a three-item subscale used to measure participants’ general feelings of happiness and life satisfaction both at home and at work (Easton & Van Laar, 2012). The score on this subscale can range between 1-5. In the current study, the participants’ scores ranged between 1-5 (M=3.69, SD=.88). The subscale showed good internal reliability and internal consistency (α=.75).

Job and Career Satisfaction (JCS) is a six-item subscale that measured the level to which a participant feels a sense of achievement, satisfaction, and fulfillment at work (Easton & Van Laar, 2012). The score on this subscale can range between 1-5. In the current study, the participants’ scores ranged between 1.67-5 (M=3.71, SD=.69). The JCS subscale demonstrated good internal reliability and internal consistency (α=.79).

Control at Work (CAW) is a three-item subscale designed to measure the level to which a participant feels that they can engage in what they perceive as appropriate levels of control at work (Easton & Van Laar, 2012). The score on this subscale can range
between 1 and 5. In the current study, the participants’ scores ranged between 1-5 (M=3.75, SD=.92). The CAW subscale showed good internal reliability and internal consistency (α=.82).

Working Conditions (WCS) subscale is used to measure the level of participants’ feelings of security, working conditions and access to resources at work and includes three items (Easton & Van Laar, 2012). The score on the WCS subscale can range between 1-5. In the current study, the participants’ scores ranged between 1-5 (M=3.83, SD=.78). The subscale showed good reliability and internal consistency (α=.77).

Stress at Work (SAW) is a two-item subscale that is used to measure the level of participants’ perception of excessive levels of stress and/or pressure at work (Easton & Van Laar, 2012). The score on this subscale can range between 1-5. In the current study, the participants’ scores ranged between 1-5 (M=2.44, SD=1.07). The SAW subscale showed good internal reliability and internal consistency (α=.83).

**Data Analysis and Results**

This section presents the research questions examined for this study, including data analysis and results.

**Research Question (RQ1).** What is the relationship between nature relatedness (as measured by the NRS), nature exposure (as measured by the NES), and quality of work-life (as measured by the WRQoLS) among student affairs professionals?

H₀: There are no relationships between the subscales of nature relatedness, nature exposure, and quality of work-life among student affairs professionals.
H$_{a}$: There are relationship(s) between the subscales of nature relatedness, nature exposure, and quality of work-life among student affairs professionals.

A two-tailed Pearson Product-Moment ($r$) correlational analysis was used to examine the relationship between nature relatedness, nature exposure, and quality of work-life among student affairs professionals. A correlational analysis was chosen because it shows the direction and quality of the relationship between the ten variables in this study (Heppner et al., 2016; Morgan et al., 2011). All three nature relatedness subscales, the total nature exposure scale score, and the six quality of work-life subscale scores were analyzed using a Pearson’s $r$ correlation matrix. The ten variables used in this correlation matrix were 1) NR-Perspective subscale, 2) NR-Self subscale, 3) NR-Experience subscale, 4) NES total score, 5) WRQoL Job and Career Satisfaction subscale, 6) WRQoL General Wellbeing subscale, 7) WRQoL Stress at Work subscale, 8) Control at Work subscale, 9) Home-Work Interface subscale, and 10) WRQoL Working Conditions subscale.

Pearson Product-Moment correlations ($r$) provided an estimate of the magnitude and direction of the relationship between nature relatedness, nature exposure, and quality of work-life variables (Heppner et al., 2016). The Pearson correlation coefficient can have a range of -1 to +1, depending on the strength and direction of the relationship (Heppner et al., 2016). The magnitude of the relationships was evaluated using values outlined by Cohen (1988). Accordingly, $r$ values ranging from 0 to 0.10 are considered small, values around 0.30 are considered moderate, and values above 0.50 are considered strong (Balkin & Kleist, 2017). The following is a summary of the significant
relationships found in this analysis (see Table 5). The results indicated that several of the subscales had statistically significant relationships with each other. These correlations, beginning with the correlations between Nature Relatedness and the Work-Related Quality of Life are discussed below.

**Nature Relatedness and Quality of Work-Life**

The results of the correlation matrix revealed that NR-Perspective, NR-Self, and NR-Experience subscales were negatively correlated with four of the Work-Related Quality of Life subscales (Table 5). Specifically, the analysis indicated that the first dimension of Nature Relatedness, NR-Perspective (the external, nature related worldview of participants or sense of agency concerning human actions on all living things) had significant, small negative correlations with the WRQoL variables of Home-Work Interface (HWI) ($r = -.15, p<.01$), Job and Career Satisfaction Scale (JCS) ($r = -.12, p<.05$), Working Conditions (WCS) ($r = -.20, p<.001$), and the Stress at Work subscale (SAW) ($r = -.20, p<.01$).

The analysis also revealed that the second dimension of Nature Relatedness, NR-Self (internalized identification with nature) had a statistically significant, small negative correlation with one WRQoL subscale Stress at Work ($r = -.12 p<.05$). Finally, the NR-Experience subscale (physical familiarity with the natural world) had a significant, small negative correlation with the WRQoL Stress at Work (SAW) ($r = -.16 p<.01$).

**Nature Exposure**

The results of the correlation matrix indicated that the Nature Exposure total scale had statistically significant relationships with all three of the Nature Relatedness
subscales (NR-Perspective, NR-Self, and NR-Experience) (Table 5). The analysis indicated that the NES Total score (NES), according to Cohen’s indicators, had a statistically significant positive correlation with the NR-Perspective subscale (r=.36 p<.01), NR-Self subscale (r=.64, p<.01), and the NR-Experience subscale (r=.65 p<.01).

The analysis also indicated that the NES total score was not statistically correlated with any of the WRQoL subscales: Job and Career Satisfaction (r=.02, p=.69), General Wellbeing (r=0.09, p=.13), Stress at Work (r=-.09, p=.13), Control at Work (r=.02, p=.69), Home-Work Interface (r=.05, p=.38), and WRQoL Working Conditions (r=.01, p<.87).

Based on the results, the H0: there are relationship(s) between the subscales of nature relatedness, nature exposure, and quality of work-life among student affairs professionals) was partially supported. This conclusion is based on statistically significant relationships found between the variables of nature relatedness and several of the work-related quality of life subscales. In addition, statistically significant relationships were found between the Nature Exposure total score and the NR-Perspective, NR-Self, and NR-Experience subscales.

**Research Question Two (RQ2).** Does nature relatedness (as measured by NRS total score) predict quality of work-life (as measured by WRQoLS total score) among student affairs professionals?

H0: There will be no significant prediction of work-related quality of life (total score) by nature relatedness (total score) for student affairs professionals.
Ha: There will be a significant prediction of work-related quality of life (total score) by nature relatedness (total score) for student affairs professionals.

To address research question two, a simple linear regression was conducted to examine whether the Nature Relatedness Scale total score would predict the Work-Related Quality of Life total score in student affairs professionals. In order to answer this question, the [Analyze: regression: Linear] commands were used in IBM SPSS 25. The nature relatedness total score was selected as the independent (predictor) variable and the work-related quality of life total score was selected as the dependent (criterion) variable. The results were not statistically significant (see table 6). The results indicated that Nature Relatedness was not a significant predictor of Work-Related Quality of Life, $R^2$ of .008, $F(1,273)=2.32$, $p<.13$ among student affairs professionals. Therefore, the findings did not support the hypothesis. Based on the results, the investigator failed to reject the $H_0$: There will be no significant prediction of work-related quality of life (total score) by nature relatedness (total score) for student affairs professionals.

Research Question Three (RQ3). Does nature exposure as measured by NES total score mediate the relationship between nature relatedness as measured by NRS total score and quality of work-life as measured by WRQoL total score among student affairs professionals?

$H_0$: Nature exposure (NES total score) will not mediate the relationship between nature relatedness (NRS total score) and quality of work-life (WRQoL total score) among student affairs professionals.
Hₐ: Nature exposure (NES total score) will mediate the relationship between nature relatedness (NRS total score) and quality of work-life (WRQoLS total score) among student affairs professionals.

RQ3 was dependent upon obtaining a significant result in RQ2. As no significant relationship found between the nature relatedness total score and the WRQoL total score among student affairs professionals, it was not necessary to run a mediation analysis that included the Nature Exposure scale (NES) as a mediating variable.

Conclusion

In summary, this chapter provided information about data cleaning and scoring of the instruments and a summary of the results. Results from the correlational analysis showed some statistically significant correlations. The NR-Perspective subscale (the external, nature related worldview of participants or sense of agency concerning human actions on all living things) had small negative correlations with four of the WRQoL subscales: HWI, JCS, WCS, and SAW. NR-Self (internalized identification with nature) and NR-Experience (physical familiarity with the natural world) showed small negative correlations with the work-related quality of life subscale of Stress at Work. Finally, statistically significant positive relationships were found between the NES total score and the nature relatedness subscales NR-Perspective, NR-Self, and NR-Experience. There were no statistically significant results found in RQ2 exploring the relationship between NR total score and WRQoL total score. The next chapter will conclude this study, it includes an in-depth discussion of the findings, implications for practice, limitations, and recommendations for future research.
CHAPTER V
DISCUSSION

Introduction

As noted in earlier chapters, there is limited research on student affairs professionals’ quality of work-life along the dimensions of job satisfaction, life satisfaction, subjective wellbeing, and holistic wellbeing (Chessman, 2015; Edwards et al., 2009; Johnsrud, 2002). A review of previous research on quality of work-life in student affairs professionals has shown that this population may experience variable turnover rates, high levels of work related stress, and various quality of work-life issues (Edwards et al., 2009; Fontinha et al., 2016; Johnsrud & Rosser, 2002; Johnsrud, 2002; Tytherleigh et al., 2005). Tytherleigh et al. (2005) found that University work-life has a variety of stressors associated with it, including perceived control at work, job insecurity, and work environment issues. In fact, according to Johnsrud and Rosser (2002) and Rosser and Javinar (2003) quality of work-life has a relationship with student affairs professionals’ satisfaction and morale. This relationship may also have an institutional impact, as diminished quality of work-life can lead to increased turnover rates and professionals’ intentions to leave the organization (Johnsrud & Rosser, 2002; Rosser & Javinar, 2003). These findings indicate a need to continue to explore quality of work-life among student affairs professionals. In addition, there is a need to include nature in this exploration because failing to include nature in career development research has limited the scope in contemporary research and practice (Peruniak, 2010; pp. 147-150). The current exploratory study was created to address the gaps in the research by examining
the relationship between nature relatedness (NR), nature exposure (NES), and quality of work-life (WRQoL) among student affairs professionals.

The research questions for this study were as follows:

**RQ1.** What is the relationship between nature relatedness (as measured by the NRS), nature exposure (as measured by the NES), and quality of work-life (as measured by the WRQoLS) among student affairs professionals?

To answer research question one, a descriptive correlational design was used. The results of the correlational matrix yielded several statistically significant results between the following variables: **Nature Relatedness:** NR-Perspective subscale and WRQoL Job and Career Satisfaction subscale \((r=-.12, p<.05)\), WRQoL Working Conditions subscale \((r=-.20, p<.01)\), WRQoL Home Work Interface subscale \((r=-.15, p<.01)\), and WRQoL Stress at Work Subscale \((r=-.20 p<.01)\). **NR-Self subscale and WRQoL Stress at Work subscale \((r=-.12, p<.01)\). Nature Exposure:** Nature Exposure total score and NR-Perspective subscale \((r=.36, p<.01)\), NR-Self subscale \((r=.64, p<.01)\), and NR-Experience subscale \((r=.65, p<.01)\).

**RQ2.** Does nature relatedness (as measured by NRS total score) predict quality of work-life (as measured by WRQoL total score) among student affairs professionals?

To answer research question two, a simple linear regression was used. The results indicated that Nature Relatedness was not a significant predictor of Work-Related Quality of Life, \(R^2 = .008\), \(F(1,273)=2.32, p<.13\). The next section will discuss these
findings in depth, including a discussion of the results, implications for the profession, limitations of the study, and recommendations for future research.

**Discussion of the Results**

The results of this study suggested that there were significant relationships between nature relatedness and several aspects of quality of work-life.

**Nature Relatedness and Quality of Work-Life**

The first finding of this study were significant small correlations between the Nature Relatedness subscales of NR-Perspective, NR-Self, and NR-Experience and four WRQoL subscales of Job and Career Satisfaction (JCS), Home-Work Interface (HWI), Working Conditions (WCS), and Stress at Work (SAW). Details of the correlations are addressed in this section.

The results of this study indicated that a student affairs professional’s environmental concern and sense of agency might have a small relationship with their perception of work environment, including job satisfaction, working conditions, home-life balance, and perception of stress. For instance, there was a small negative correlation found between NR-Perspective which is a person’s view about their relationship with nature and their awareness of how their behavior has an impact on the Earth (e.g. “the state of nonhuman species is an indicator of the future of humans”) and WRQoL subscale of Job and Career Satisfaction (JCS) \( r = -.12, p < .05 \). This finding suggests it is possible that student affairs professional’s environmentalist attitudes might be related with mildly lower satisfaction at work. This finding is congruent with some existing findings in Ecopsychology in that life satisfaction are likely tied to environmental ecology. As
Nisbet et al. (2009) stated, humankind is facing continual environmental issues yet continue to engage in behaviors that are damaging to our health and the health of the Earth (Nisbet et al., 2009; Oskamp, 2000). Further exploration of this realm is needed.

It was also found that NR-Perspective had a significant small negative relationship the Working Conditions (WCS) subscale ($r=-.20, p<.01$) which measures whether or not student affairs professionals find their physical working environment satisfactory (Easton & Van Laar, 2012). The relationship here is small, so caution should be used when interpreting this result. This subscale focuses on the physical work environment. It is possible that that student affairs professionals who have environmental concerns might be perceive working conditions as less favorable. Again, further inquiry is needed. We live in a society where institutional efforts typically do not always address environmental concerns effectively, and higher education institutions are no exception. In the United States, it is quite likely that people with pro-environmental attitudes might work on a campus where limited institutional effort is placed on environmentalism. This incongruence might have an adverse relationship with student affairs professionals’ perception of working conditions.

Until recent years, most Western industrialized cultures have viewed humanity as separate and often times superior to nature (Kimmerer, 2013, p. 9; Lumber et al., 2017). This anthropocentric point of view has influenced development of places of work and living, and initiatives in higher education. However, reconnecting with nature has slowly become a concentration in recent research. In addition, general discourse surrounding environmental concerns appear to be growing in United States Colleges and Universities.
(Plant, 2014). As a result, many campuses across the United States are increasing their efforts to *go green* and to become more environmentally friendly. In a recent release of the Princeton Review, it was found that 413 colleges and universities (out of 700 schools surveyed), reported strong commitments to sustainability and “green practices” on their campuses (The Princeton Review, 2019). There are several colleges and universities moving toward green initiative goals, however, these efforts are not universal. These findings point to a potential for colleges and universities to consider green dialogue in attending to employee working conditions, satisfaction and morale.

NR-Perspective or a person’s environmental sense of agency also had a small negative correlation with the Home-Work Interface ($r = -.15, p<.01$) subscale, which is a measure of perceived satisfaction with work-life balance (Easton & Van Laar, 2012). Although this relationship was small, it suggests there may be a relationship between a person’s environmental concerns and perceived sense of work and home life balance. Again, further inquiry is needed.

There was a significant small significant relationship between NR-Perspective and Stress at Work (SAW) ($r = -.20, p<.01$). The results of the current study suggest a small relationship between environmental concern and increased stress. If a student affairs professional is experiencing increased stress, this can be due to a myriad of factors, and among them could be environmental concern. Feelings of decreased autonomy in student affairs professionals’ perceived ability to engage in pro-environmental behaviors at work can feel stressful. The link between quality of life concerns and disconnect from the natural world is also reverberated in previous research.
(Nisbet et al., 2009). Venhoeven, Bolderdijk and Steg (2013) suggested that people with strong nature relatedness tendencies or “pro-environmental conservation attitudes, world view and sense of agency relating to nature including the impacts of humans on all living things” might simultaneously feel that they know the right thing to do and additionally feel they do not have the autonomy to do anything about it. This dissonance can cause stress, and future inquiry is warranted.

The second finding of this study related to NR-Self, which is a personal affiliation with nature and Stress at Work (SAW). The analysis revealed a significant small negative correlation with one WRQoL subscale which was SAW ($r=-.12$, $p<.05$). Although the relationship found in this study was small, other studies have found stronger relationships between nature and stress. This relationship is recurring in literature. Nature relatedness is generally considered a positive characteristic, perhaps even a basic human function. However various studies have highlighted both positive and negative associations between nature relatedness and quality of life factors such as stress (Dömötör, Szemerszky, & Köteles, 2019; Hurly & Walker, 2019; Zelenski & Nisbet, 2014).

In their study on nature and wellbeing, Mayer et al. (2009) concluded that negative wellbeing consequences (such as stress) can be related to high nature relatedness. In part because of our own approach to environmentalist efforts toward change. For example, some campaigns toward pro-environmental behavior can be fear based and negative, highlighting the likelihood of impending global doom and collapse (Mayer et al., 2009; Roszak, 2001). There may be a compounding effect that occurs when a person has a sense of decreased self-efficacy in regard to pro-environmental behaviors
at work. If the individual is very connected to nature on an intrapsychic level and yet does not live and work in a work culture where nature is considered. The dissonance might result from feeling responsible for the vitality of the planet while being immersed in settings where environmentalism is not encouraged. This stress might also be exacerbated when popular environmentalist messages are steeped in doom and gloom, offering a bleak outlook on the future (Mayer et al., 2009; Roszak, 2001, p.35).

Nature relatedness and/or just having nature in our lives has been positively associated with various quality of life factors such as decreased anxiety and stress, and increased happiness and mindfulness (Capaldi et al., 2014; Dömötör et al., 2019; Grahn & Stigsdotter, 2003; Howell et al., 2011; Nisbet et al., 2011; van den Berg, Maas, Verheij, & Groenewegen, 2010). In a recent meta-analysis examining nature connectedness and wellbeing, it was found that nature relatedness was connected with vitality and other measures of eudaimonic wellbeing (Capaldi et al., 2014; Nisbet et al., 2011). Zhang et al. (2014) found a relationship between connectedness with nature and mental wellbeing (self-esteem), while Reese et al. (2014) found a significant relationship between nature relatedness and physical wellbeing. Cervinka, Roderer, and Hefler (2011) found connections between nature relatedness and psychological wellbeing. Martyn and Brymer (2016), found that nature relatedness was significantly related with lowered levels of anxiety. This finding is consistent with research by Lawton et al. (2017) who reported that nature relatedness was negatively correlated with anxiety, and positively correlated with psychological wellbeing. There have also been some negative associations found as well. For example, Dean et al. (2018) reported participants with
higher NR-total, NR-self, and NR-perspective scores self-reported higher levels of stress. In addition, Reese et al. (2014) found a negative relationship between NR-Self and factors related to essential self which is a term that encompasses a person’s spirituality, self-care, gender identity, and cultural identity, or “one's existential sense of meaning, purpose, and hopefulness toward life” (Myers & Sweeney, 2004). In addition, Venhoeven et al. (2013) recently examined the nuanced relationship between pro-environmental behavior and wellbeing and concluded that an affiliation with nature may have both a detrimental and positive influence on wellbeing (Venhoeven et al., 2013). By reviewing related literature, one can see that research in this area has yielded mixed results.

The variability in results mentioned above suggests that the relationship between nature relatedness and work-related quality of life is complicated. This provides rationale for future research, to better understand the relationship between nature relatedness and WRQoL. The fluctuation and inconsistency of previous findings suggest that the exploration on how one’s relationship with nature impacts subjective wellbeing is likely nuanced and layered with cultural and social factors. This study is a small contribution in the web of our greater collective story. It serves as a start, an exploration, and a call for expansion.

Lastly, the NR-Experience subscale that measures a person’s physical understanding and comfort with the natural world, often seen in those who seek out experiences in nature and take notice of nature in any environment (Nisbet et al., 2009), was found to have a significant small negative relationship with the WRQoL subscale of SAW (r=-.16, p<.01). This finding suggests that there may be a small relationship
between nature relatedness (experience) and stress at work. Again, future research is needed to explore this relationship. In relation to this concept, campuses may continue to increase access to green spaces for student affairs professionals and the greater campus community. It has been previously suggested that a person’s access to nature lowers stress levels and helps with stress recovery time (Hyvönen et al., 2018; Ulrich et al., 1991). Therefore, allowing individuals to have increased access to nature at work, and ability for student affairs professionals to find comfort in the natural world may have a positive relationship with work-related stress. Future inquiry into this potential relationship is needed.

While RQ1 examined the relationship between nature relatedness, nature exposure, and quality of work-life, RQ2 examined the relationship between nature relatedness (total score) and quality of work-life (total score). The results indicated that there was not a significant relationship between the predictor variable Nature Relatedness (total score) and the criterion variable Work-Related Quality of Life (total score), $R^2=0.08$, $F(1, 273)= 2.32\ p< .13$. Some statistically significant relationships were found between subscales of nature relatedness and quality of work-life, but it does appear that there is not a significant relationship between student affairs professionals’ general nature relatedness score and quality of work-life total score. The implication of this finding is that nature may be more closely related to certain dimensions of quality of work-life more than others, specifically, satisfaction at work, working conditions, home-work interface, and stress. Since this an early study, future studies are needed to further validate or refute these results.
Nature Exposure and Nature Relatedness

This study also examined the relationship between nature exposure and nature relatedness. The results revealed statistically significant relationships between the Nature Exposure Scale (NES) and all of the Nature Relatedness (NR) subscales. The NES was found to have statistically significant correlations with the NR-Perspective subscale ($r = .36$, $p < .01$), NR-Self subscale ($r = .64$, $p < .01$), and the NR-Experience subscale ($r = .65$, $p < .01$).

There was a statistically significant moderate correlation identified between student affairs professionals’ NES total score and the NR-Perspective subscale ($r = .36$, $p < .01$). This finding is consistent with a growing body of literature that suggests that being regularly exposed to nature contributes to greater environmental awareness and general affiliation with nature (Capaldi et al., 2014; Lumber et al., 2017; McMahan & Estes, 2015; Zelenski & Nisbet, 2014). This finding is also consistent with the biophilia hypothesis, which is humans’ natural tendency toward reverence and love for nature. The biophilia hypothesis suggests that when given the opportunity, people naturally gravitate toward a closer relationship with nature (Wilson, 1984). This was recently confirmed by a recent study by Swami et al. (2016) that concluded that exposure to nature is associated with higher connectedness with nature. Global studies have consistently shown that exposure to nature leads to an increased sense of wellbeing and greater affiliation and connection with nature (Capaldi et al., 2014; Lumber et al., 2017; Reese & Myers, 2012). These findings suggest that what has been generally confirmed in previous research
might also be true for student affairs professionals, that increased access to nature might be related to increased nature relatedness.

There was a significant strong positive relationship found between student affairs professionals’ NES total score and the NR-Self subscale which is one’s personal identification with nature ($r=.64$, $p<.01$). This finding suggests that there is a strong relationship between student affairs professionals’ general exposure to nature and their internalized affinity with nature. It is consistent with previous research which found that students who were enrolled in an environmental psychology course scored higher on the NRS and in general wellbeing (Nisbet et al., 2011). Relatedly, Reese et al. (2014), reported that nature relatedness was associated with both increased physical wellness and sense of wellness in considering oneself as a part of nature. They also found that people who were physically active and had increased experiences in nature reported “greater agency in their relationship with nature and included nature in their self-concept.” (Reese et al., 2014). The findings of Reese et al. (2014) are consistent with previous research suggesting relating with or being with nature improves health and wellbeing (Chang & Chen, 2005; Dean et al., 2018; Lawton et al., 2017; Louv, 2011). The findings in this study suggest that the act of being in nature is related to a greater affiliation with and affinity for nature. These findings provide further support for the biophilia hypothesis being true for student affairs professionals.

**Nature Exposure and Quality of Work-Life**

In RQ1 there were no statistically significant relationships between nature exposure as measured by the NRS total score and any of the WRQoL subscales for
student affairs professionals. These results are surprising because the relationship between nature and wellbeing have been extensively researched, and access to green spaces have been previously shown to influence many aspects of wellbeing for people in work settings. It has been shown that a person’s exposure to nature significantly relates quality of life especially in a variety of settings both at home and at work (Hartig et al., 2014; Hyvönen et al., 2018; Largo-Wright et al., 2011; Reddon, 2019; Ulrich, 1984;). In addition, research has also shown that there are clear benefits to exposure to nature at work, including reduced workplace stress and greater satisfaction with work-life (Kaplan, 1993; Leather et al., 1998; Russell et al., 2013). Perhaps future research can focus more specifically on student affairs professionals’ exposure to nature in various work environments and the relationship between their exposure to nature and general work-life satisfaction.

As the results of this study have demonstrated there are interesting relationships between nature and the quality of work life for student affairs professionals. The next section of discusses the implications for the fields of student affairs and career development and counseling.

**Implications of Findings**

The findings from this study have several implications for both the field of student affairs and career development and counseling. The rapidly changing global climate and economy presents unique challenges for professionals in student affairs, career counseling, and higher education (Andersen & Vandehey, 2012). As anticipated by
Bingham and Ward (1994), the upcoming years will continue to bring new challenges for the field of career development:

If vocational counseling was born from the changing demographics and economic needs of this century, then clearly career counseling will need to change in response to the changing needs of the coming century (p. 168). For instance, the relationship between increased nature relatedness and stress may be in part due to working in settings where nature-based initiatives and connection are not essential in the operations of the university. Western industrialized cultures have historically viewed humans and nature as separate entities (Lumber et al., 2017). The heavy anthropocentric point of view has predisposed our initiatives in higher education to lack in nature relatedness. Therefore, reconnecting with nature should be a focus for student affairs practitioners and career counselors in the coming years.

**Implications for Student Affairs Professionals**

Alfred Adler believed that every human is a part of a large ecological community, in which is essential for a person to feel a sense of identity and belongingness (Dreikurs Ferguson, 1984). This sense of belonging is what binds human together, with each other and with their environment (Dreikurs Ferguson, 1984). As a part of belonging, humans have a need for growth and contribution. This is why social activities that connect student affairs professionals with the Earth are so essential. In a recent discussion by King and McIntyre (2018), a variety of activities were discussed to help nurture the human-nature connection. The ideas discussed by King and McIntyre were primarily for counseling settings but can easily be adapted to settings in higher education and especially student
affairs. The following activities are suggestions, based on adaptations of the activities identified by the aforementioned authors; 1) “greening” projects on campus, 2) use of campus gardens, 3) increased green space on campus, 4) experiential activities (e.g., gardening or nature walks) that foster social interest in the campus community, 5) outdoor team building activities, 6) engaging in environmentally sustainable behavior on campus. The activities mentioned here are all steeped in social interest can nurture the feeling of belonging and enhance student affairs professionals’ connection with each other and with the Earth. These activities all foster the Adlerian concept of social interest and nurture the human need for growth and contribution (King & McIntyre, 2018). This is why social activities that allow people to connect with the Earth are so essential (Brymer et al., 2010; King & McIntyre, 2018). Native ways of knowing point to the sacred elements of the human nature connection and places great value on honoring this connection (Andersen & Vandehey, 2012). One way to nurture the Human-Earth connection is through creating a harmonious lifestyle in which one’s ecological self is congruent with career and life choices (Andersen & Vandehey, 2012). Student affairs practitioners can seek to continue to find creative ways to enhance wellbeing through habits of self-renewal. There are several ways to do this. The Student Affairs profession can make the following considerations in order to enhance ecological quality of work-life on campus: acknowledge the environmental impact of career choices, create educational programming for students surrounding environmentalism, shift focus of career development beyond secular gain to ecological wellbeing factors, and consider “greening” their routine at work by integrating sustainability practices in their daily work
life (e.g. recycling, bicycling to work, and engaging in Earth day activities) (Plant, 1999). Engaging in small group activities such as: community gardening, nature walks, community clean-ups, and challenge courses. There are also small ways student affairs professionals can include nature at work as well, such as finding time to spend brief moments with nature while at work, taking a walk on one’s lunch break, scheduling meetings as walking meetings, listening to guided visualizations of safe nature spaces, and finding daily activities that enhance one’s connection with nature (e.g., moving potted plants into the office, using nature based decorations, and creating art surrounding nature or nature elements).

In regard to the biophilia hypothesis, perhaps the global environmental crisis is deeply affecting student affairs professionals on many levels; physical, cultural, quality of work-life, and deep intrinsic wellbeing. When a student affairs professional feels an internal conflict between their innate biophilia and lives in a society disconnected from nature (large buildings, wasteful business practices, lack of connection with nature), this may decrease their quality of work-life. This can manifest as stress, decreased work-home life balance, decreased satisfaction and work, and overall negative perception of working conditions.

The conversation surrounding holistic quality of work life and nature does not stop at how we can use nature to fulfill our needs. It is also important to discuss how people can flourish through their own contributions to the natural world as well. In regard to Peruniak (2010) and Plant’s (1999) value of reflecting on sustainability practices on campus: student affairs practitioners could consider advocating for greener campus
initiatives such as recycling, composting, and/or Earth Day programming. Being proactive with environmental initiatives in the campus community might enhance one’s self-efficacy in regard to nature-based career issues, and in turn might lower stress levels and enhance feelings of satisfaction at work. Environmental restoration work has been said to produce positive changes in people including feelings of community and belonging, autonomy, and sense of dignity (Shapiro, 1995, p.225).

In addition, advocacy is one of the core ethical standards for the profession, as highlighted in section four of the ACPA Statement of Ethical Principles and Standards (2006), “Student affairs professionals, both as citizens and practitioners, have a responsibility to contribute to the improvement of the communities in which they live and work and to act as advocates for social justice for members of those communities.” A key component of developing an identity of social justice and advocacy is learning to work within a system, in order to become a change agent. Student affairs professionals who have a strong affiliation with nature can develop their advocacy lens by learning to live within their natural environment (urban, rural, or suburban), educate themselves on the ecological needs of their community, and advocate for Earth rights just as they would for students. Ultimately, the health of the natural spaces in their community has an impact on the wellbeing of the campus community where they serve. Setting goals that include our ethical responsibility to the natural world can help reduce the dissonance some professionals might experience from both having high nature relatedness and working in industrial settings where nature is not revered or respected. As stated by Patricia Hasbach
(2016) this relationship is mutual, and it provokes consideration of ethical responsibility in regard to our use of natural resources and relationship with nature.

**Implications for Career Development and Counseling**

Holistic career development includes attention to the health of an individual in regard to holistic home and life variables including the impact of globalization, industrialization, removal of nature from our environment, and workplace ecology (Andersen & Vandehey, 2012; Peruniak, 2010; Plant, 2014). As such, career counselors and researchers need to be constantly aware of the ever-changing influences on the modern worker. However, as discussed by Plant (2014) most well-known career theories are focused mostly on individual career development. Historically, the career development field has deeply rooted theories in individualistic counseling approaches (Plant, 2014), reflective of Western, individualistic values.

Peruniak (2010) and Plant (1999) offered several suggestions for *greening* conversations surrounding career development with clients. Historically, nature and humankind has been viewed in a dualistic lens (Jordan & Hinds, 2016; Macy, 2009). Greening career counseling involves dissolving dualism and shifting toward an ecological approach to career. Counselors can think ecologically in regard to the reciprocal impact of nature on career development and of career development on nature. In addition, career counselors can consider nature as “intimate other” (Adams, 2010) in all career counseling settings by considering nature in their conversations and approaches to counseling.

Keeping this in mind, several influential post-modern career approaches have begun to incorporate societal and holistic views in regard to view of career (Andersen &
Vandehey, 2012). One such contemporary theory is Social Cognitive Career Theory (SCCT), which emphasizes the interplay between the individual and environmental influences that affect how a person responds to and makes meaning of their environment (Andersen & Vandehey, 2012, pp. 87-93; Lent & Brown, 1996). A core underpinning in SCCT and the postmodern shift in career development is a move toward the view of career as a holistic concept, deeply intertwined with diversity, culture, wellbeing, quality of life, ecology, and global issues. An emphasis on holism and social interest also radiates through Adlerian Psychology which has informed many contemporary Ecopsychology and wellness-based models of counseling. The implications for career development professionals outlined in this section are approached through postmodern lens that emphasize the relationship between career development and nature and where there is an emphasis on collective good.

Career counselors can integrate stewardship, conservation, and collective responsibility in their work with clients (Plant, 2014). They can do this by assisting clients in identifying how work environment influences their quality of work-life in regard to their perceived level of self-efficacy (an individuals perceived choice in being successful), and their pro-environmental attitudes. Self-efficacy is a term widely used in SCCT, referring to a person’s evaluation of their own individual choice and ability to take action (Andersen & Vandehey, 2012; Lent & Brown, 1996). Self-efficacy can be addressed in green conversations in career development. One example would be a conversation surrounding how a client’s internal nature relatedness responds to their current work environment. For example, if a person identifies incongruence between self
and work, career counselors can help clients create positive experiences to enhance self-efficacy in regard to pro-environmental behaviors (Andersen & Vandehey, 2012). An example of a positive experience would be initiating small green practices in their student affairs unit. These can be micro-activities that bolster self-efficacy and promote environmental attitudes. Some examples might be promoting reusable utensils instead of plastic cutlery or bringing more plants into the office. Positive experiences are said to enhance self-efficacy, so helping clients set realistic goals to nurture their pro-environmental worldviews and behaviors at work can be helpful in strengthening their self-efficacy, environmental stewardship, and advocacy as a global community member (Andersen & Vandehey, 2012, pp. 353-354).

In addition, counselors can shift focus from individualism toward ecological systems-based counseling that includes conversations surrounding self within the context of a global community. Green counseling does not abandon the importance of the individual and traditional career approaches to career development, rather broadens the approaches to be more holistic and inclusive in nature. Having a holistic relationship with nature through exposure and through our emotional connection can be quite healing in a counseling relationship (Clinebell, 1996; Jordan & Hinds, 2016). There are many nature-based methods to healing (Jordan & Hinds, 2016). Green Counseling/Ecotherapy simply broadens the career development scope, integrating global concern and holism in conceptualization of career development.

Another important implication for greening career development is the concept of holism. Holism is a concept that acknowledges that the individual’s quality of life
includes the whole person, mind body and spirit, within the contexts of relationships, work, and society. All systems are interrelated and interdependent on one another, and so our wellbeing is not separate from the health of the people around us and the Earth we are a part of (Sweeney, 2019; Witmer, 1985). Nature provides a lens for comprehending *holism*. Holistic career development includes attention to the health of an individual in regard to work variables and holistic life variables. Alfred Adler believed that every human is a part of a large ecological community, in which is essential for a person to feel a sense of belongingness (Dreikurs Ferguson, 1984). This sense of belonging is what binds human together and to our environment (Dreikurs Ferguson, 1984). As a part of this belonging, humans have a need for growth and contribution. This is why social activities where we connect with the Earth are so essential. As stated by Peter Plant (1999) in his essay on Green Career Development, there is abundant evidence that pollution, overconsumption, and waste have an impact on our global economy and our personal wellbeing. Plant states that in modern society, we are constantly being challenged to reflect on the impacts of our choices on the global community (Plant, 1999). He encourages us to empower ourselves and the clients we work with to enhance our environmental self-concept and boost *social interest* (Adler, 1930), through integrating the fringe focus of environmentalism in our mainstream efforts and conversation (Plant, 1999).

Mayer et al. (2009) previously suggested that when thinking of how to create settings in which people experience greater levels of quality of work-life we may need to think of something larger than the individual. This includes consideration of one’s
relatedness to the natural world. Based on previous research, it has been shown that there are benefits in feeling connected with nature. Some of these benefits include increased mental health and wellbeing, decreased stress, increased autonomy, self-esteem, and holistic wellness (Brymer et al., 2010; Reese & Myers, 2012).

Plant (2014) recommends that green counseling should be “proactive, questioning, probing, reflexive, and client centered in a real sense… especially in relation to globalization… common goals come into focus.” As Plant (2014) stated, there are a number of principles that assist practitioners in green guidance. These principles include building awareness of the environmental impact of career choice, playing an active role in education surrounding environmental issues, considering more than just economic issues in career development, green activism, and including the broad global society in conversations surrounding career development (Plant, 2014). There are several principles that are helpful in greening career development conversations including 1) thinking about environmental impact of career decision making, 2) finding ways to contribute to environmental sustainability (e.g., joining or starting a sustainability initiative on campus), 3) using environmental goals (as well as economic goals) in recognizing one’s own career success, and 4) reflecting on sustainability practices on campus. In conclusion, it is important to remember our entire society was “built on Mother Nature,” and thus nature should be included in discussions surrounding quality of work-life (Peruniak, 2010; Plant, 2014).
Limitations

This study was one of the first known studies to explore the relationship between nature relatedness, nature exposure, and quality of work-life in student affairs professionals. In contemporary research, there has been very little research examining the relationship between these three variables. While the study offers some important insights for the student affairs profession and the field of career development, it does have some limitations. Due to the exploratory nature of this study, there are some limitations to keep in mind.

One limitation is related to the generalizability of the findings. The sample was collected solely through an email recruitment from the American College Personnel Association (ACPA). This study examines the relationship between these variables with a group of 275 student affairs professionals who identify as members of ACPA. Due to the limited scope in sampling, future studies should include a larger sample size and use multiple sources for sampling. This sample may not be representative of all student affairs professionals, as the professionals included in this study both 1) self-selected to be a member of the organization and 2) self-selected to participate in the study. As such, there could be some participant selection bias evident in this study. The study also may not be generalizable to all student affairs professionals (especially those who do not reside or identify with the United States). Future studies may include broader populations, including more diverse groups of professionals, working in a variety of roles and settings. In addition, recruitment procedures could be expanded to broad means, i.e.
social media and other professional organizations (such as National Association of Student Personnel, NASPA) for student affairs professionals.

Another limitation of this study is the diversity of the participants. There were 275 of 347 cases that were usable in this study, suggesting that several individuals did not complete their surveys. This could be due to the online nature of the survey, answer fatigue, and/or lack of interest in the subject. In addition, there was homogeneity observed in the demographics in this sample. The sample comprised predominantly females who identified as White and resided in the United States. Experiences of student affairs professionals outside of the United States and/or who identify in diverse gender and racial/ethnic categories were underrepresented in this study. These elements of diversity are important for the generalization of results and may add complexity to future studies.

**Recommendations for Future Research**

This exploratory study was the first to examine the relationship between nature relatedness, nature exposure, and quality of work-life among student affairs professionals. Therefore, replication and future exploration in this area is needed to acquire a deeper understanding of these relationships in order to enhance quality of work-life for the student affairs professional community. As Peruniak (2010) previously stated, “although psychology and career development have been slow to acknowledge the role of nature,” there have been a number of researchers who are contributing to knowledge in the field.
The idea of nature relatedness being a basic human need has been circulating in contemporary research for the last several years. For example, the biophilia hypothesis points to a need that humans are born with to connect with and have concern for nature (Tam, 2013; Wilson, 1984). There is a potential for future research on these domains as biophilia may account for the decreased hedonic (subjective) wellbeing if a person is in a work environment where their love for nature is not actively nurtured and encouraged. As Mayer et al. (2009) identified, for millennia, humans have had their lives surrounded by nature—and in the grand scheme in time, “it is only a tick of the clock” that we have spent in modern life, “working in concrete buildings, driving in climate-controlled cars and living in relatively densely populated areas shut off from nature.”

Lysack (2010) said that somehow, on a deep level, humans may feel the Earth’s natural ecosystem being disrupted. This deep-rooted awareness stems from our biophilic tendencies and relatedness with nature. Therefore, as the earth faces biotic degradation, our emotional rhythms and satisfaction with life is also disrupted (Lysack, 2010). As our ecological system continues to degrade and shift in response to human consumption, the relationship between nature and quality of work-life might become more apparent. It would be interesting to look at trends in quality of work-life issues in relation to nature relatedness over time in a longitudinal study. It would also be interesting to explore these relationships in a cross-sectional study, comparing groups from different geographical areas in the world, including information on the health of wildlife ecology in the region (e.g. if the region is currently experiencing deforestation, resource shortages, draught).
Meanwhile, in a recent study on nature relatedness and happiness factors, Nisbet et al. (2011) and posited that individuals who deeply value the health of the Earth and are aware of environmental threats and crises may influence other dimensions of wellbeing, such as life satisfaction. Therefore, future research could aim to explore student affairs professionals’ general environmental attitudes in relation to quality of work-life. Understanding these connections could influence the greening of campuses, where we aim funding and initiatives, and social advocacy efforts including all living beings. In addition, it would be interesting to compare the quality of work-life characteristics for student affairs professionals who work on green campuses with to those who do not, to see if differences exist between the groups. Future studies could also include a between group comparison between student affairs professionals who work in green-initiative campuses and those who work in campuses without green spaces. One could explore how or if these groups might differ along the dimensions of nature relatedness and quality of work-life.

The current study found negative relationships between the dimensions of NR-Perspective, which is a person’s understanding of their interaction with nature and sense of agency regarding their impact on the natural world and the quality of work-life dimensions of working conditions, job and career satisfaction, stress at work, and home-work interface. These results deserve future inquiry. Perhaps qualitative inquiry about the lived experiences of individuals including student affairs professionals who score high on nature relatedness may provide a depth of insight on the complex reality of balancing a love for nature with working behind concrete walls in an industrial environment.
Potential research implications include a qualitative phenomenological inquiry to enhance understanding in this realm.

Although few correlations were found between nature relatedness, nature exposure, and quality of work-life in this study, previous research suggests that relationships do exist between nature relatedness and wellbeing (Howell et al., 2011; Louv, 2011; Mayer & Frantz, 2004; Reese & Myers, 2012; Zelenski & Nisbet, 2014). Therefore, future research studies could aim to explore these relationships again, either through replication or further exploration. In addition, future research may examine the influence of campus environment and the location of workplaces on the results (ex. urban vs. rural campus). Also, future studies could explore the relationship between pro-environmental behavior, nature relatedness, and perceived sense of control and stress at work. This study serves as an invitation for researchers and educators to incorporate nature in future inquiry. Peruniak (2010) asks, “…if nature is so apparently and closely related to career development, why is there so little written about it in career development?” There overwhelming existing evidence that people’s relationship with nature impacts wellbeing, yet, little has been explored in the realm of career development. Therefore, the investigator recommends that how nature relatedness impacts wellbeing at work be explored further in future research.

In addition, there are two interesting results that are worth mentioning for future research. There were two moderate negative relationships found between NRS-Self and the WRQoL subscale of HWI ($r=-.70$, $p<.26$) and the NRS-Experience and the WRQoL subscale of HWI ($r=-.68$, $p<.26$). Neither of these relationships are statistically significant
but warrant future inquiry on the relationship between Home-Work Interface and Nature Relatedness variables in student affairs professionals.

Previous research suggests that nature relatedness may differ between various socio-demographic groups (Dean et al., 2018). Socio-economic variables hold a variety of complex factors that influence a person’s quality of life and quality of work-life. It was echoed by Reese and Myers (2012) that conceivably demographic variables influence the relationship between factors and future research is needed. This presents an opportunity for research on the influence of sociocultural factors that may influence a person’s connection with nature and work. It is recommended that future studies examine how socioeconomic variables influence one’s nature relatedness, exposure to nature, and quality of work-life for student affairs professionals. In addition, previous research suggests that quality of work-life may differ between groups in regard to professional ranking (entry level, mid-level, and senior level student affairs professionals). Therefore, it is recommended a between group comparison be included in future research studies and that studies focus on one socio-demographic variable at a time to gain an in-depth inquiry into the relationships that might exist.

Lastly, it has been noticed by researchers that “nature” as a concept is hard to define, and in addition, contact with nature proves illusory to measure (Hartig et al., 2014). The NES scale, although proving internal consistency, is a four-item measure and is not immune to these limitations. The results found in this study between nature exposure and quality of work life are not consistent with existing literature. Previous research has pointed to nature exposure being a buffer for stress, having positive
influences on physical and psychological health, and increases wellbeing and self-esteem (Barton & Pretty, 2010; Bell, Phoenix, Lovell, & Wheeler, 2014; Brymer et al., 2010; Hartig et al., 2001; Laumann et al., 2003; Louv, 2011; Shanahan et al., 2016; van den Berg et al., 2010). Perhaps future studies could include additional measures to observe one’s access to nature at work, such as the Nature Contact Questionnaire (NCQ) (Largo-Wright et al., 2011). The NCQ is a 16-item measure that may provide a more comprehensive view between one’s objective contact with nature in relation to quality of work-life variables.

**Conclusion**

This was one of the earliest studies to examine the relationship between nature relatedness, nature exposure, and quality of work-life among student affairs professionals which found that nature relatedness had small negative correlations with quality of work-life variables, including Job and Career Satisfaction, Home Work Interface, Working Conditions, and Stress at Work. No relationship was found between nature exposure (as measured by the NES) and quality of work-life variables. These relationships have just been discovered and are not fully understood, therefore future research is strongly recommended.

Meanwhile, the findings have implications for the field of career counseling and student affairs. Such as career development professionals should perhaps include the discussion of nature in counseling and research. This direction in career development research is unique and a call for community and collaboration between fields. There is
hope in this call. This call is echoed by Sherri Mitchell (2018), Weh’Na Ha-Mu Kwasset, a Native American lawyer, teacher and activist from Maine:

In our bodies we carry the blood of our ancestors
and the seeds of the future generations. We are a living conduit to all life.

When we contemplate the vastness of the interwoven network
that we are tied to, our individual threads of life seem far less fragile.

We are strengthened by who we come from and inspired by those who will follow
(p.11).

As the Anasazi Foundation (2013) stated, “the Ancient Ones knew this well—
most particularly the wise teachers among them—those who, in the Navajo tongue, were
called ‘Anasazi’… there is a power in nature that man has ignored. And the result has
been heartache and pain” (p. xiii). This study was intended to bridge the gap between
ecopsychology and career development, and to serve as an open invitation for
collaboration between fields with a goal to strive toward increasing quality of work-life
for student affairs professionals, and the entire working population.
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Table 1. Descriptive Demographics

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>n</th>
<th>M</th>
<th>Mdn</th>
<th>SD</th>
<th>%</th>
<th>NRS Total</th>
<th>WRQoL Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>275</td>
<td>38.49</td>
<td>36</td>
<td>10.77</td>
<td>**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender Identity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Man/Male/Masculine</td>
<td>81</td>
<td>29.5</td>
<td>3.64</td>
<td>3.71</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transgender</td>
<td>3</td>
<td>1.1</td>
<td>3.69</td>
<td>2.92</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Woman/Female/Feminine</td>
<td>166</td>
<td>60.4</td>
<td>3.68</td>
<td>3.59</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender non-conforming/Gender queer</td>
<td>12</td>
<td>4.4</td>
<td>3.79</td>
<td>3.07</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Prefer not to answer</td>
<td>13</td>
<td>4.7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Racial Identity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>African American/Black</td>
<td>25</td>
<td>9.1</td>
<td>3.18</td>
<td>3.43</td>
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<td></td>
<td></td>
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<tr>
<td>Asian/Asian American</td>
<td>7</td>
<td>2.5</td>
<td>3.85</td>
<td>3.71</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hispanic/Latina/Latino</td>
<td>5</td>
<td>1.8</td>
<td>3.65</td>
<td>3.87</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Multiracial/Biracial</td>
<td>11</td>
<td>4.0</td>
<td>3.83</td>
<td>3.25</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Individuals who list two or more races</td>
<td>2</td>
<td>0.7</td>
<td>4.29</td>
<td>3.02</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Native Hawaiian/Pacific Islander</td>
<td>3</td>
<td>1.1</td>
<td>3.25</td>
<td>3.46</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White/Caucasian/European American</td>
<td>211</td>
<td>76.7</td>
<td>3.75</td>
<td>3.62</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Missing response or 'prefer not to answer'</td>
<td>11</td>
<td>4.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 2. *Descriptive Work-life Variables*

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>n</th>
<th>M</th>
<th>SD</th>
<th>Mdn</th>
<th>%</th>
<th>NRS Total</th>
<th>WRQoL Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hours Worked Weekly</td>
<td>273</td>
<td>46.75</td>
<td>8.43</td>
<td>45</td>
<td>**</td>
<td>**</td>
<td>**</td>
</tr>
<tr>
<td>Level of Employment (ACPA designations)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New Professional</td>
<td>68</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>24.7</td>
<td>3.57</td>
</tr>
<tr>
<td>Mid-Level Professional</td>
<td>109</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>39.6</td>
<td>3.64</td>
</tr>
<tr>
<td>Senior Professional</td>
<td>98</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>35.6</td>
<td>3.81</td>
</tr>
<tr>
<td>Environment of Home Residence</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rural</td>
<td>44</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>16.0</td>
<td>3.86</td>
</tr>
<tr>
<td>Suburban</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>36.4</td>
<td>3.65</td>
</tr>
<tr>
<td>Urban Small City</td>
<td>78</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>28.4</td>
<td>3.71</td>
</tr>
<tr>
<td>Urban Metropolitan</td>
<td>53</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>19.3</td>
<td>3.57</td>
</tr>
<tr>
<td>Do most of your workweeks follow a:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Standard Schedule (8am-5pm M-F)</td>
<td>176</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>64.0</td>
<td>3.71</td>
</tr>
<tr>
<td>Non-standard Schedule (variable hours outside of the standard 8am-5pm M-F)</td>
<td>99</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>36.0</td>
<td>3.65</td>
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</table>
Table 3. *Reliability Estimates for Scales*

<table>
<thead>
<tr>
<th>Measure</th>
<th>Measure Description</th>
<th>( \alpha ) Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nature Relatedness Scale (Total)</td>
<td>0.90</td>
<td></td>
</tr>
<tr>
<td>NR-Self</td>
<td>0.86</td>
<td></td>
</tr>
<tr>
<td>NR-Perspective</td>
<td>0.68</td>
<td></td>
</tr>
<tr>
<td>NR-Experience</td>
<td>0.85</td>
<td></td>
</tr>
<tr>
<td>Nature Exposure Scale (Total)</td>
<td>0.73</td>
<td></td>
</tr>
<tr>
<td>Work Related Quality of Life Scale (Total)</td>
<td>0.83</td>
<td></td>
</tr>
<tr>
<td>Control at Work (CAW)</td>
<td>0.82</td>
<td></td>
</tr>
<tr>
<td>Job &amp; Career Satisfaction (JCS)</td>
<td>0.79</td>
<td></td>
</tr>
<tr>
<td>General Well-being (GWB)</td>
<td>0.89</td>
<td></td>
</tr>
<tr>
<td>Home Work Interface (HWI)</td>
<td>0.75</td>
<td></td>
</tr>
<tr>
<td>Working Conditions (WCS)</td>
<td>0.77</td>
<td></td>
</tr>
<tr>
<td>Stress at Work (SAW)</td>
<td>0.83</td>
<td></td>
</tr>
</tbody>
</table>
Table 4. *Scores on subscales for Student Affairs Professionals*

<table>
<thead>
<tr>
<th>Scale</th>
<th>n</th>
<th>Range</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Cronbach’s α</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nature Relatedness</td>
<td>275</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NR-Self</td>
<td></td>
<td>1.25-5.0</td>
<td>3.68</td>
<td>.76</td>
<td>.86</td>
</tr>
<tr>
<td>NR-Perspective</td>
<td></td>
<td>2.43-5.0</td>
<td>4.03</td>
<td>.58</td>
<td>.68</td>
</tr>
<tr>
<td>NR-Experience</td>
<td></td>
<td>1.0-5.0</td>
<td>3.28</td>
<td>.95</td>
<td>.85</td>
</tr>
<tr>
<td>NR Total Score</td>
<td></td>
<td>1.62-4.9</td>
<td>3.58</td>
<td>.65</td>
<td>.90</td>
</tr>
<tr>
<td>Nature Exposure</td>
<td>275</td>
<td>4.0-20.0</td>
<td>13.89</td>
<td>3.07</td>
<td>.73</td>
</tr>
<tr>
<td>Work Related Quality of Life</td>
<td>275</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control at Work (CAW)</td>
<td></td>
<td>1.0-5.0</td>
<td>3.75</td>
<td>.92</td>
<td>.82</td>
</tr>
<tr>
<td>Job &amp; Career Satisfaction (JCS)</td>
<td></td>
<td>1.67-5.0</td>
<td>3.71</td>
<td>.69</td>
<td>.79</td>
</tr>
<tr>
<td>General Well-being (GWB)</td>
<td></td>
<td>1.0-5.0</td>
<td>3.58</td>
<td>.83</td>
<td>.89</td>
</tr>
<tr>
<td>Home Work Interface (HWI)</td>
<td></td>
<td>1.0-5.0</td>
<td>3.69</td>
<td>.88</td>
<td>.75</td>
</tr>
<tr>
<td>Working Conditions (WCS)</td>
<td></td>
<td>1.0-5.0</td>
<td>3.83</td>
<td>.78</td>
<td>.77</td>
</tr>
<tr>
<td>Stress at Work (SAW)</td>
<td></td>
<td>1.0-5.0</td>
<td>2.44</td>
<td>1.07</td>
<td>.83</td>
</tr>
<tr>
<td>WRQoL Total Score</td>
<td></td>
<td>1.0-5.0</td>
<td>3.68</td>
<td>.64</td>
<td>.83</td>
</tr>
</tbody>
</table>
Table 5.

*Correlation Matrix: Nature Relatedness Scale, Nature Exposure Scale, and WRQoL Scale (n=275)*

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Wellbeing</td>
<td>1</td>
<td>.53</td>
<td>.69</td>
<td>.54</td>
<td>.68</td>
<td>.39</td>
<td>.09</td>
<td>.06</td>
<td>-.10</td>
<td>-.004</td>
</tr>
<tr>
<td>WRQoL Control at Work</td>
<td>1</td>
<td>.61</td>
<td>.16</td>
<td>.02</td>
<td>.01</td>
<td>-.11</td>
<td>-.04</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WRQoL Working Conditions</td>
<td>1</td>
<td>.35</td>
<td>.01</td>
<td>-.07</td>
<td>-.20</td>
<td>-.07</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NES total</td>
<td>1</td>
<td>.64</td>
<td>.36</td>
<td>.65</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NR-Self</td>
<td>1</td>
<td>.55</td>
<td>.74</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NR-Perspective</td>
<td>1</td>
<td>.36</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NR-Experience</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Pearson Correlation Sig (2-tailed)
Table 6.

*Simple linear regression analysis for Nature Relatedness total score predicting Work Related Quality of Life total score (n=275)*

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>95% CI</th>
<th>β</th>
<th>t</th>
<th>p (Sig.)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>LL</td>
<td>UL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>3.93</td>
<td>3.47</td>
<td>4.39</td>
<td>16.92</td>
<td>.00</td>
</tr>
<tr>
<td>NRS Total</td>
<td>-.095</td>
<td>-.22</td>
<td>.03</td>
<td>-1.52</td>
<td>.13</td>
</tr>
</tbody>
</table>

Predictor Variable: NRS Total Score
Dependent Variable: WRQoL Total Score

*Note.* $R^2 = .008$, $F(1,273)=2.32$, $p<.13$, ($r=-.09$)

*Model Summary*

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.092*</td>
<td>.008</td>
<td>.005</td>
<td>.658</td>
</tr>
</tbody>
</table>

Predictor: NRS Total Score
Dependent Variable: WRQoL Total Score
APPENDIX A: PARTICIPANT CONSENT FORM

The Relationship between Nature Relatedness, Nature Exposure, and Quality of Work-life among Student Affairs Professionals

We are inviting you to participate in this research study. This research is being conducted by Breanne Hiivala, under the guidance of Dr. Jacqueline Lewis in the Department of Counseling and Student Personnel at Minnesota State University, Mankato. If you wish to participate in this study (IRB # 1445161), it is necessary that you first fully read and complete this consent form.

PARTICIPATION
The purpose of this study is to help researchers better understand the relationship between Nature Relatedness, Nature Exposure, and Quality of Work-life in Student Affairs Professionals. If you wish to participate in this study, you will be asked to complete an online Qualtrics survey, which includes three inventories related to your level of Nature Relatedness, Nature Exposure, and Quality of Work-life. You will also be asked to respond to seven prompts related to demographic variables. The time commitment for participation is estimated to be 15-20 minutes.

Participation in this study is voluntary. You may stop taking the survey by closing the web browser at any time. If the survey is not completed within one week, the survey results will be recorded as a partial completion in Qualtrics.com. Your decision whether or not to participate will not affect your relationship with Minnesota State University, Mankato, and refusal to participate will involve no penalty or loss of benefits. You may refuse to answer any question, for any reason. You may also exit the survey at any time before the data collection is complete without penalty or loss of benefits.

BENEFITS AND RISKS
The risks you will encounter as a participant in this research are not more than experienced in your everyday life. There are no individual benefits in completing this study. The potential benefit to society is that it may help us learn more about Nature Relatedness, Nature Exposure, and Quality of Work-life in higher education.

COMPENSATION
- Drawings will be held for two $25 Amazon Gift Cards at the end of this study. The funding for this project was provided by the Richard Annis Scholarship, through the Department of Student Personnel at Minnesota State University, Mankato. If you wish to be included in the random drawing, please fill out the second survey (you will be directed to a new survey for the drawing at end of the main survey), including your name and contact information for the drawing. The odds of winning a gift card depend on the number of consenting participants. The
The approximate number of participants involved in this study is unknown at this time.

CONFIDENTIALITY
Your survey answers will initially be stored with Qualtrics.com in a password protected electronic format. Within six months after the completion of the study, data will be downloaded and stored in a locked filing cabinet in the Principal Investigator, Dr. Jacqueline Lewis’ office for three years, after which it will be destroyed.

Names and contact information collected in the secondary drawing survey will remain separate from the general survey data.

Twenty-four items about quality of work-life will be shared with the primary researchers for the QoWL scale for the purposes of validation. There will be no names or personally identifiable information other than “members of the American College Personnel Association” attached to this specific data set.

CONTACT
If you have any questions about this research study, contact Dr. Jacqueline Lewis at (507)389-2324 or Jacqueline.lewis@mnsu.edu. If you have any questions about participants’ rights and for research-related injuries, please contact the Administrator of the Institutional Review Board, at (507)389-1242. If you would like more information about the specific privacy and anonymity risks posed by online surveys, please contact the Minnesota State University, Mankato Information and Technology Services Help Desk (507-389-6654) and ask to speak to the Information Security Manager.

You have a right to a copy of the consent form and it may be obtained by contacting Dr. Jacqueline Lewis at (507)389-2324 or at Jacqueline.lewis@mnsu.edu.

CONSENT
Submitting the completed survey will indicate your informed consent to participate and your assurance that you are at least 18 years of age. Please print a copy of this consent form for your reference.

Please click "yes" if you consent to participate in the study. Click "no" if you do not wish to participate in this study.
APPENDIX B: RECRUITMENT EMAIL

Subject: Dissertation research on the Relationship between Nature and Quality of Work-life in Student Affairs Professionals

Greetings ACPA Member!

It's an honor to reach out to you. My name is Breanne Hiivala, a doctoral graduate student at Minnesota State University in Mankato, MN. My dissertation is about the relationship between nature and quality of work-life for student affairs professionals.

Criteria for participation:
(1) Professional currently employed as a student affairs professional at an institution of higher education
(2) Currently holding a position that requires a physical presence on campus

If you choose to participate in the study you will be asked to complete a consent form, demographic form and a survey including three inventories. The process is expected to last about 15-20 minutes.

If you participate in the study, you have the option of being entered for a drawing to win one of two $25 (twenty-five) dollar gift cards from Amazon.com. The odds of winning depend on the number of participants who consent to be entered in the drawing. Your survey data and information to enter the gift card drawing will be kept separate from the general survey. The study has IRB approval (IRB # 1445161).

I greatly appreciate your consideration.

If you have questions about my study, please contact my dissertation chair by email at Jacqueline.lewis@mnsu.edu.

Click here to take the survey
Thank you!

Breanne Hiivala, MS, LPC
Doctoral Candidate
Jacqueline Lewis, PhD
Dissertation Chair
Department of Counseling and Student Personnel
Minnesota State University, Mankato
APPENDIX C: DEMOGRAPHIC FORM

1. How do you describe your relationship with ACPA, based on your country of national identification? (National identification is defined as the country with which you primarily associate)
   - U.S. identified member of ACPA
   - Member of ACPA, not identified with the U.S.
   - Prefer not to answer

2. How do you describe your racial identity?
   - Free response ________________________________
   - Prefer not to answer

3. How do you describe your gender identity?
   - Free response ________________________________
   - Prefer not to answer

4. Age

<table>
<thead>
<tr>
<th>18</th>
<th>26</th>
<th>34</th>
<th>43</th>
<th>51</th>
<th>59</th>
<th>67</th>
<th>75</th>
<th>84</th>
<th>92</th>
<th>100</th>
</tr>
</thead>
</table>

   Age ()

4. Hours worked weekly

<table>
<thead>
<tr>
<th>0</th>
<th>10</th>
<th>20</th>
<th>30</th>
<th>40</th>
<th>50</th>
<th>60</th>
<th>70</th>
<th>80</th>
<th>90</th>
<th>100</th>
</tr>
</thead>
</table>

   Hours worked weekly ()
5. Level of Employment (ACPA Designations)
   - New Professional (0-5 years of experience in higher education)
   - Mid-Level Professional (Minimum of a Master’s Degree and 5+ years of higher education experience)
   - Senior Professional (Minimum of a Master’s Degree and senior position title of vice chancellor, VP, dean or director or related position)

6. Do most of your work weeks follow a:
   - Standard Schedule (8am-5pm M-F)
   - Non-standard schedule (variable hours outside of the standard 8am-5pm M-F)

7. What best describes the environment of your home residence?
   - Rural
   - Suburban
   - Urban Small City
   - Urban Metropolitan
APENDIX D : IRB APPROVAL LETTER

September 4, 2019

Dear Jacqueline Lewis, PhD:


Your IRB Proposal has been approved as of September 4, 2019. On behalf of the Minnesota State University, Mankato IRB, we wish you success with your study. Remember that you must seek approval for any changes in your study, its design, funding source, consent process, or any part of the study that may affect participants in the study (see https://grad.mnsu.edu/irb/revision.html). Should any of the participants in your study suffer a research-related injury or other harmful outcome, you are required to report them to the Associate Vice-President of Research and Dean of Graduate Studies immediately at 507-389-1242.

When you complete your data collection or should you discontinue your study, you must submit a Closure request (see https://grad.mnsu.edu/irb/closure.html). All documents related to this research must be stored for a minimum of three years following the date on your Closure request. Please include your IRBNet ID number with any correspondence with the IRB.

Cordially,

Bonnie Berg, Ph.D.
IRB Co-Chair

Jeffrey Buchanan, Ph.D.
IRB Co-Chair

Mary Hadley, FACN, Ph.D.
IRB Director

This letter has been electronically signed in accordance with all applicable regulations, and a copy is retained within Minnesota State University, Mankato IRB’s records.
**APPENDIX E: NATURE RELATEDNESS SCALE**

**Nature Relatedness Scale**

*Instructions: For each of the following, please rate the extent to which you agree with each statement, using the scale from 1 to 5 as shown below. Please respond as you really feel, rather than how you think “most people” feel.*

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disagree strongly</td>
<td>Disagree a little</td>
<td>Neither Agree or disagree</td>
<td>Agree a little</td>
<td>Agree strongly</td>
</tr>
</tbody>
</table>

1. I enjoy being outdoors, even in unpleasant weather. [Blank] 12. I am not separate from nature, but a part of nature. [Blank]

2. Some species are just meant to die out or become extinct. [Blank] 13. The thought of being deep in the woods, away from civilization, is frightening. [Blank]

3. Humans have the right to use natural resources any way we want. [Blank] 14. My feelings about nature do not affect how I live my life. [Blank]

4. My ideal vacation spot would be a remote, wilderness area. [Blank] 15. Animals, birds and plants should have fewer rights than humans. [Blank]

5. I always think about how my actions affect the environment. [Blank] 16. Even in the middle of the city, I notice nature around me. [Blank]

6. I enjoy digging in the earth and getting dirt on my hands. [Blank] 17. My relationship to nature is an important part of who I am. [Blank]

7. My connection to nature and the environment is a part of my spirituality. [Blank] 18. Conservation is unnecessary because nature is strong enough to recover from any human impact. [Blank]

8. I am very aware of environmental issues. [Blank] 19. The state of non-human species is an indicator of the future for humans. [Blank]

9. I take notice of wildlife wherever I am. [Blank] 20. I think a lot about the suffering of animals. [Blank]

10. I don’t often go out in nature. [Blank] 21. I feel very connected to all living things and the earth. [Blank]

11. Nothing I do will change problems in other places on the planet. [Blank]
**Scoring Information**

Reverse scored items: 2, 3, 10, 11, 13, 14, 15, 18; NR-self items: 5, 7, 8, 12, 14, 16, 17, 21; NR-perspective items: 2, 3, 11, 15, 18, 19, 20; NR-experience items: 1, 4, 6, 9, 10, 13

**Overall NR score is calculated by averaging all 21 items** (after reverse scoring appropriate items). Scores on the 3 NR dimensions are also calculated by averaging appropriate items after reverse scoring.

A short-form version of the NR scale (NR-6) consists of items: 4, 5, 7, 9, 17, 21. Items are averaged to create a score on the brief measure of NR. No items are reverse scored.

**Referencing information:**

APPENDIX F: NATURE EXPOSURE SCALE

Nature Exposure Scale (NES)

We are interested in your exposure to nature, both in your everyday life and activities, and when you take
yourself on excursions outside of your everyday environments. Please complete the following questions to
reflect your level of exposure to natural physical environments.
These 'natural environments' could be in urban (city parks for example) or rural areas. They could
include such things as plants and animals (native or non-native), natural geography (e.g. hills, mountains,
deserts, beaches, marshlands), natural water courses and waterscapes (e.g. rivers, streams, lakes, ponds,
ocean). Having a view which includes these types of natural environments is also relevant.
This is in contrast to the so called ‘built environment’ of houses, buildings, roads and all other such
structures created by humans.

Nature exposure in your everyday life and environments

1. **In your everyday home, travel and work environments and activities, please rate your level of exposure to ‘natural environments’**.

   Please circle a number:

   \[ \begin{array}{ccc}
   5 & 4 & 3 \\
   \text{High} & \text{Medium} & \text{Low} \\
   \text{Most of my everyday environment is natural.} & \text{About half of my everyday environment is natural} & \text{Very little of my everyday environment is natural} \\
   \end{array} \]

2. **How much do you notice the natural environments in your everyday life?**

   Please circle a number:

   \[ \begin{array}{ccc}
   5 & 4 & 3 \\
   \text{A great deal} & \text{Somewhat} & \text{Not Much} \\
   \end{array} \]

Nature exposure during excursions OUTSIDE of your everyday environments

These questions relate to your level of exposure to nature when you are outside of your everyday environments.
This would include trips you make in your leisure time (or occasionally as part of your study, work or social activities) to nature-rich environments in urban, rural or ‘wilderness’ areas.
These might be places that you travel to once a week, or less frequently – either for the express purpose of being in the natural environment or for some other main purpose.

3. **Please rate the frequency (how often) of exposure to nature-rich environments outside of your everyday environment. (Please circle)**

   Please circle a number:

   \[ \begin{array}{ccc}
   5 & 4 & 3 \\
   \text{High} & \text{Medium} & \text{Low} \\
   \text{once a month or more often} & \text{once every few months} & \text{once a year or less} \\
   \end{array} \]

4. **How much notice would you take of the nature in these environments?**

   Please circle:

   \[ \begin{array}{ccc}
   5 & 4 & 3 \\
   \text{A great deal} & \text{Somewhat} & \text{Not Much} \\
   \end{array} \]
## Appendix G: Work-Related Quality of Life Scale (WRQoL)

### Work-Related Quality of Life Scale

**Strictly Confidential**

Your response is very important to us! Please note that no one from your organisation will see your questionnaire. A summary may be provided to your employer but no information will be released that might identify any individual. Please do not take too long over each question; we want your first reaction not a long drawn out thought process. Please do not omit any questions. This isn’t a test, simply a measure of your attitudes to the factors that influence your experience at work.

*Please indicate your answers by filling in the circles like this: ○, if you make a mistake do this: ☒*

<table>
<thead>
<tr>
<th>To what extent do you agree with the following?</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I have a clear set of goals and aims to enable me to do my job</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>2. I feel able to voice opinions and influence changes in my area of work</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>3. I have the opportunity to use my abilities at work</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>4. I feel well at the moment</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>5. My employer provides adequate facilities and flexibility for me to fit work in around my family life</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>6. My current working hours / patterns suit my personal circumstances</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>7. I often feel under pressure at work</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>8. When I have done a good job it is acknowledged by my line manager</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>9. Recently, I have been feeling unhappy and depressed</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>10. I am satisfied with my life</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>11. I am encouraged to develop new skills</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>12. I am involved in decisions that affect me in my own area of work</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>13. My employer provides me with what I need to do my job effectively</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>14. My line manager actively promotes flexible working hours / patterns</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>15. In most ways my life is close to ideal</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>16. I work in a safe environment</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>17. Generally things work out well for me</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>18. I am satisfied with the career opportunities available for me here</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>19. I often feel excessive levels of stress at work</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>20. I am satisfied with the training I receive in order to perform my present job</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>21. Recently, I have been feeling reasonably happy all things considered</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>22. The working conditions are satisfactory</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>23. I am involved in decisions that affect members of the public in my own area of work</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>24. I am satisfied with the overall quality of my working life</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

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APPENDIX F: WORK-RELATED QUALITY OF LIFE SCALE (WRQoL) NOTICE TO POTENTIAL USERS OF THE WRQoL SCALE

Notice to potential users of the WRQoL scale
We have hundreds of researchers who use our WRQoL scale each year. The WRQoL scale is free to use provided you agree to the following two conditions.

1 You use the scale for non-commercial, educational or research purposes only (ie. no one is charged a fee).
2 You agree to email any WRQoL data (in this format) to us. We will add these data to our International database and use them only for the purpose of further validating the WRQoL scale (e.g. updating norms, creating benchmark datasets).

We also ask that you let us have full access to any translation you have used so we can make it available to other researchers.

If you are a consultant, coach or profit making organisation, please contact us for details of licensing the WRQoL scale or for a quote to run your survey for you.

If you agree to the above then please: click here to go to downloads

For more information about using our scales, please see our researchers page.

Dear Researcher, many thanks for getting in touch with us.

I am pleased to hear you think our scale may be useful. The WRQoL scale is used by researchers in many countries and is based on our 15 years of research into the quality of working life.

The original WRQoL scale, its translations, the user manual and scoring key are all available through our downloads page. The user manual also contains the current norms so you can see how your sample differs from our benchmark.

You are free to copy the questionnaire in this form for your research or non-commercial project as long as you mention QoWL copyright and pass us a copy of your data to add to our benchmark data sets. Please use our data analysis checklist page for more details about the information we require and the correct spreadsheet correct format.

You may also be interested in our QoWL Workplace Wellbeing Outcome (WWO) scale, which provides a number of common outcome measures that have found to be related to Quality of Working Life.

Any items you want to use from our QoWL Biographical Information Scale would also helpful to us. If you have any queries or problems please contact us.

Other projects we are interested in
Although it is likely you will already have your project defined, we are especially interested in the following projects and may be able to offer you extra support in return for your data and permission to publish.

- WRQoL scale used with older workers
- WRQoL and other Job satisfaction scales
- WRQoL and data from non-UK organisations
- Data from translations of the WRQoL scale

**Ethics**

As you imagine, we cannot support researchers who wish to use our scale in an unethical way. If you conduct your own research we ask you to assure us that you have full ethical permission from the relevant body to undertake your research. We offer the scales to you as they appear and do not accept responsibility for the way you use them or conclusions you draw.

**Privacy**

If you wish to use one of our scales and send us your data in the format specified, please be assured that we will have no way of knowing who the people are in your sample. However, for our benchmarking and validation purposes, we need to describe your sample data in general terms at the very least - e.g. 'UK Engineers'; but so we know what benchmark sample we should file it under, we'd like to have as much detail as possible, e.g. 'Shop floor Marine engineers and managers at Vosper Thornycroft site in Portsmouth'. Accompanying your data with answers to the questions from our WWO and/or QBI scales would also be very useful to us.

If your data are particularly interesting we may contact you with a view to publishing a paper on the subject.

When you have completed your research, please pass your data in Excel or SPSS format to us at support@qowl.co.uk, or use our contact form.

Hope this helps, & good luck with your research,

Dr Darren Van Laar
Reply all

Today, 12:30 PM

Hiivala, Breanne Alyse

Bre

Now I get it.
Thanks
Given what you have told me, there is no problem sharing data with no identifiers as long as the consent form informs the potential participants what the plan is. In addition, there must be enough participants to be sure an identity cannot be determined from the data.
For example if a researcher only had 5 participants from say a given school district and one of the questions was to provide ethnicity, I could likely determine exactly who the Somali respondent was.
Mary
Appendix I: Guidelines and Instructions for Requests for Access to Membership for Research and Assessment Purposes (ACPA)

Guidelines and Instructions for Requests for Access to Membership for Research and Assessment Purposes

ACPA is committed to supporting and advancing scholarship in the field of higher education and student affairs. Interested individuals should review the guidelines and instructions for requests to access membership information for research and assessment purposes. Please Note: All researchers must be ACPA members prior to submitting a request.

Fill out the Request to Obtain Membership Information for Research Assessment Purposes Form

Principles

ACPA is committed to supporting and advancing scholarship in the field of higher education and student affairs. To that end, the following guidelines and procedures have been put in place for members interested in accessing ACPA’s membership for research and assessment purposes. The following principles serve as the foundation for the development of these procedures:

- Research requests must fit with the mission and purpose of ACPA, be culturally appropriate, and comply with ACPA's statement on non-discrimination* and ethical principles.**
- Review of research requests will not include making judgments on the quality and rigor of the study as this is evidenced by the researcher's home institutional review procedures and IRB approval, which must accompany each request.
- Research supported by ACPA must be conducted in a timely fashion in relation to the request preferably within a year’s time.
- Current ACPA policy does not allow for the release of e-mail addresses of members; however, ACPA does provide the service of sending an e-mail message and follow-up announcement, on behalf of the member researcher, on a timed schedule. This schedule will be determined, by ACPA, in consultation with the researcher. (Please note that ACPA policy allows for only one e-mail blast per week to members.)
- All requests from ACPA members will be treated equally without regard to leadership or membership status.
- ACPA has a responsibility to protect members’ rights and confidentiality. In addition, consistent with ethical research practice, research submitted for review must adhere to expectations regarding participant anonymity, confidentiality, and privacy. (nb: see definitions below).
- The process must provide assurance that ACPA members will not be unreasonably burdened by research participation requests. As such, the Association will closely monitor the number of requests and will not approve more than three (3) research requests per academic semester.
- Researchers will be required to provide a copy of a one-page abstract of the thesis/dissertation or study for possible posting on the ACPA Web site. Researchers will also be encouraged to submit proposals for national convention programs and manuscripts to ACPA publications.
- Non-members requesting membership lists will be directed to contact ACPA’s contractor, MGI Lists, to purchase the information according to the contractual fee structure. In these instances, ACPA strongly encourages non-members to become a member of the association to gain from the benefits of membership.

For the purposes of clarity in expectation, the following definitions may serve as guidelines for researchers proposing studies using ACPA members:

**Anonymity:** Refers to one’s ability to participate in research without being identified. Respondents are not identifiable because either identity information is not requested or not disclosed. Anonymity should guarantee respondents that their name (or other information) will not be released or used.

**Confidentiality:** Refers to the treatment of information that an individual has knowingly disclosed in a relationship of trust, and with the expectation that this information will not be disclosed to unauthorized parties. Confidentiality guarantees respondents that their data will not be shared in a way that can be traced back to them. This agreement made with respondents is formalized through the statement of informed consent.

**Privacy:** Guarantees that access to personal information is not disclosed without respondent’s consent.

* It is the policy of ACPA to promote equal employment opportunity through affirmative action. ACPA also complies with the District of Columbia Human Rights Law. The association does not discriminate on the basis of race, color, national origin, gender, age, affection/sexual orientation, gender identity and expression, or disability in any of its policies or practices. This non-discrimination policy covers membership and access to association programs and activities including, but not limited to, national conventions, workshops, placement services, publications, educational services, and employment.

[Download and Review ACPA’s Statement of Ethical Principles](#) (PDF)
Procedures

- **Complete the Application Below**
- **Fill out the Request to Obtain Membership Information for Research Assessment Purposes Form**
  
  Elements of the application include descriptions of the purpose of the study; connection of proposed research to ACPA’s mission and core values; identification of who is being accessed (all ACPA members or subgroups); copy of IRB proposal and approval; and statement of anticipated risks if not included in IRB application; name of faculty advisor (if student requester) and contact information; timeline and duration of project; signature indicating compliance with research ethics and non-discrimination statements.

- **Review and Approval Process**
  
  Applications will be reviewed by the Director of Educational Programs and Publications, the designated person in the international office. All requesters will receive a confirmation of receipt. If the proposal meets all criteria, and the number of requests has not exceeded the maximum three (3) per semester, the international office will approve requests. In the event of any question or discrepancies, the international office will consult with the Director of Research and Scholarship, who will provide a second review of the request and application. Under typical circumstances, we expect that applicants should receive a decision within two to four weeks time. In more complicated requests, or when the Director of Research and Scholarship is consulted, the time may be extended.

  Each request is reviewed for duplication of prior research topics and sample populations. Duplicate or similar research topics and sample populations will not be scheduled in the same academic semester, including summer.

  If a researcher desires to send material to a specific commission or standing committee, the researcher should contact the chair of that group who can send an e-mail through ACPA web-based services.

  Requests to communicate with ACPA members via ACPA listservs will not be approved as listservs are primarily an informational vehicle for the association.

- **Fee Structure**
  
  Members whose research requests are approved by ACPA will not be assessed a fee.

  Non-members requesting a member list will be directed to contact ACPA’s contractor, MGI Lists, whose information is provided in the Membership...
section of the ACPA Web site. Prices for mailing labels for non-members are available from MGI Lists; non-members are strongly encouraged to join the association at a cost of $129 or $79 for those who are employed at member institutions.

- **Terms and Conditions** An approval letter will be signed by the International Office and/or the Director of Research and Scholarship outlining all expectations and requirements. In addition, all letters of invitation to study participants must include language that the study has been approved by an appropriate IRB board and that the research internally approved by ACPA in accordance with our contractual obligations with MGI Lists.