
Shyla A. Earl  
*St. Catherine University*

Erin Heinitz  
*St. Catherine University*

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Urban Adolescent Women and Urban Nature:
A Phenomenological Inquiry of the Human-Nature Relationship

Shyla A. Earl & Erin Heinitz

St. Catherine University

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Dedications

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Abstract

The Human-Nature Relationship (HNR) is a complex, dynamic co-evolutionary relationship between humans and nature that governs human health and ecological sustainability. Demographic factors (e.g., age, gender) and personal perception (e.g., beliefs, thoughts, values) shape this relationship and subsequent human and ecological health; therefore, understanding the HNR for specific populations is imperative. We conducted a phenomenological inquiry into the lived experience of urban adolescent women (UAW) to describe their HNR, particularly with urban nature, through open-ended interviews with 10 urban female-identified persons aged 13-18. We use Interpretive Phenomenological Analysis (IPA) and find that UAW express their HNR through three themes: Authenticity of Nature, Connection to Nature, Self, and Others, and Disruption of the HNR. All participants describe nature as genuine rather than human-made. Nature’s authenticity bestows space and time for UAW to re-balance the self and connect with nature. Participants prefer immersion in wild nature to using urban nature, because they perceive the built urban environment, modernization, and social factors to disrupt their relationship with nature. This inquiry supplies foundational information for future research regarding UAW and their HNR. We recommend conducting Participatory Action Research to develop and implement meaningful urban nature programing for UAW to nurture their HNR within the urban environment. This study offers insight for policy makers and educators interested in serving UAW, supporting their HNR, health, and environmental literacy.

Keywords: adolescent women, ecology, Human-Nature Relationship, nature, phenomenology, urban
Those who contemplate the beauty of the earth find reserves of strength that will endure as long as life lasts. There is something infinitely healing in the repeated refrains of nature. The assurance that dawn comes after night and spring after winter. (Carson, 1962)

**Introduction**

Humans evolved from the natural world (Roszak, 1995; Wilson, 1984) and continue to depend on it for their survival, health, and well-being (Berry, 2002). Open nature spaces encourage physical activity (Herrington & Brussoni, 2015), mental restoration (Kaplan & Kaplan, 1989; Kaplan, 1995), community cohesion (Guéguen & Stefan, 2016; Matsuoka & Sullivan, 2011; Weinstein et al., 2015; Weinstein, Przybylski, & Ryan, 2009), and a sense of awe and wonder, attributes of spiritual connection (Hedlund-de Wit, 2013; Heintzman, 2010). Due to human-nature coevolution, a bond exists between humans and the ecological world, including biophilia, which is a love for and attraction to living things (Wilson, 1984). Because of this attraction, humans seek out nature and derive physical, psychological, social, and spiritual benefits from it. In turn human behaviors such as driving automobiles or composting affect environmental health (ecological sustainability). This Human-Nature Relationship (HNR) is interconnected, interdependent, and reciprocal, affecting both human and ecological health and well-being (Jordan, 2015; Niemela et al., 2011; Wilson, 1984). Nature immersion increases human connection to and knowledge of the natural environment, encouraging pro-environmental behaviors which support the HNR (Hollweg et al., 2011; Stevenson, Peterson, Bondell, Mertig, & Moore, 2013). However, personal demographic factors, such as living in urban areas, substantially affect individual HNR.
Urban living is a relatively new phenomenon in human history (Barondess, 2008) that is vastly different from the once predominant rural agrarian lifestyle (Berry, 2002) or pre-agrarian nomadic living. The built urban environment (e.g., houses, streets, neighborhoods, infrastructure) found in modern living disrupts an ancestral relationship with nature (Niemela et al., 2011). Eighty-one percent of the U.S. population lives in urban environments (United Nations, 2014) including 11 million youth (U.S. Department of Health & Human Services [USDHHS], 2016). Urbanization shifts everyday human behavior influencing physical, mental, community, and environmental health (Galea & Vlahov, 2005). Greenberg (1991) coined the term urban health penalty to describe the health risks associated with the built urban environment: the penalties of which disproportionately burden communities of color and low-income neighborhoods (Fitzpatrick & LaGory, 2011; Jennings & Johnson Gaither, 2015).

Urban nature (e.g., parks, green spaces) is a component of the built urban environment that mitigates health inequalities (Mitchell & Popham, 2008) and reduces health consequences associated with urban living such as obesity, decreased cardiovascular health, heat-related illnesses, and psychological concerns (Jennings & Johnson Gaither, 2015). However, Crawford et al. (2008) and Wen, Zhang, Harris, Holt, and Croft (2013) present barriers to urban nature use, such as distance to parks, or amount and quality of green space. Because of these barriers, urban residents, and specifically, urban adolescent women (UAW), do not access or use urban nature similarly.

Lloyd, Burden, and Kiewa (2008) show that suburban adolescent women value suburban parks, yet they under-use them based on the age and gender of other park users. Research specifically addressing age and gender as determinants of urban park use for UAW does not exist. However, Gomez, Johnson, Selva, and Sallis (2004) identify barriers such as neighborhood
safety that limit UAW’s access to and use of urban nature spaces for physical activity. Gearin and Kahle (2006) and Ries et al. (2009) find that green space quality influences adolescent women’s use of urban nature spaces. In addition to physical and social variables affecting UAW’s access to urban nature, perceptual factors may also minimize use.

UAW’s perceptions may shadow personal awareness of urban nature benefits limiting urban nature exposure (Nisbet & Zelenski, 2011). Learning how UAW connect with (or don’t) and perceive urban nature lays a foundation to better understand their unique relationship with nature, particularly urban nature. This foundation can help mitigate access and use disparities and inform green space designs that serve the unique needs of UAW thereby strengthening their relationship with nature (Gearin & Kahle, 2006; Lloyd, Burden, & Kiewa, 2008; Mäkinen & Tyrväinen, 2008; McAllister, 2008; Wiens, Kyngas, & Polkki, 2016).

Critical and constructivist paradigms acknowledge that these young women are the experts best able to relay their experiences with urban nature (Bentz & Shapiro, 1998; Brinkman & Kvale, 2015; Guba, 1990; Larsson, Sundler, & Ekebergh, 2012; Moustakas, 1994). By asking about and listening to the perceptions that UAW hold of nature, we learn about their distinct HNR. Therefore, the purpose of this study is to conduct a phenomenological inquiry into the lived experience of urban adolescent women to describe their HNR, especially with urban nature.

Following the introduction, we examine the literature related to the HNR, demographic variables that affect the HNR, and perceptual influences on this relationship, specifically for UAW. Next, we outline the theoretical, professional, and personal lenses through which we conceived, designed, implemented and interpreted this research. Then, we discuss the method design, data collection and analysis. Finally, we present the research findings and discuss result implications for Holistic Health Studies, communities, policymakers, and future research.
Literature Review

The purpose of this chapter is to introduce the literature related to the lived experience of urban adolescent women’s (UAW) Human-Nature Relationship (HNR), specifically within the urban environment. We begin this review by exploring the HNR, which fosters a broad range of health and wellness benefits for humans and the environment. Next, we present how demographic variables, such as urbanization, socioeconomic status, age, and gender, influence the HNR and thereby personal, community, and environmental health. Then, we discuss the role perception plays in the HNR, particularly for UAW. Finally, we acknowledge the limited research describing UAW’s perspectives of their relationship with nature, specifically urban nature.

The Human-Nature Relationship

Across time and culture, humans have recognized the healing power of nature (Marcus & Barnes, 1999). Humans genetically evolve with the natural world; therefore, human biology, identity, and well-being depend on this relationship (Kellert, 1997; Wilson, 1984). Biophilia, or the love of and attraction to living things, draws humans, consciously and/or subconsciously to the natural world (Wilson, 1984). According to Seymour (2016),

the human-nature relationship goes beyond the extent to which an individual believes or feels they are part of nature. It can also be understood as, and inclusive of, our adaptive synergy with nature as well as our longstanding actions and experiences that connect us to nature. (para. 22)

Nature influences human health across the biopsychosocial-spiritual dimensions of human experience (Nisbet, Zelenski, & Murphy, 2011). The benefits of the HNR include meeting basic physical needs such as clean water and food to “the satisfaction derived from direct interaction
with nature...through exploration and development of outdoor skills; the physical appeal of nature...as a source of inspiration and peace; and the human attachment...in the form of emotional connections to landscapes and animals” (Rogers, 2016, para. 5).

The HNR is an essential component of health, healing, and wellness for both humans (Jordan, 2015; Kellert, 1997; Wilson, 1984) and the ecological world (Hedlund-de Wit, 2013; Niemela et al., 2011; Nisbet & Zelenski, 2013). This HNR is interconnected, interdependent, and reciprocal. It is a mutually beneficial bi-directional relationship in which humans love and are attracted to nature for health and well-being; nature supports human evolution, health, and well-being and the actions of humans affect ecological health (Jordan, 2015; Niemela et al., 2011; Wilson, 1984). Human awareness of this reciprocity is beneficial for ecological health. Human health is dependent on healthy ecological systems (Nisbet & Zelenski, 2013) therefore, conscious and intentional human connection to nature (e.g., ecological identity, Nature Relatedness) influences pro-environmental behaviors (Hedlund-de Wit, 2013; Niemela et al., 2011; Nisbet et al., 2011) supporting ecological (and human) health. In this section, we first discuss the human benefits of the HNR. Then, we discuss the ecological effects of this relationship, including the environmental consequences of a discordant HNR.

**Human benefits of the Human-Nature Relationship.** Core assumptions of the field of Nature-Based Therapeutics acknowledge the HNR as interconnected and reciprocal; in fact, it understands humans to be nature (Jordan, 2015). However, the Cartesian dualism of modernity (mid-1600s to present) promotes a conceptual separation of humans and nature (Jordan, 2015). This dualistic, subject/object separation and corresponding hierarchical ideology conceptually removes humans from nature. Changes in dominant ideologies and technology (e.g. urban living, techno-fix) widen this divide throughout time (Jordan, 2015; Wilson, 1984) disconnecting
humans, especially children, from the natural world (Louv, 2008). Yet this ontological separation is false; the human-nature interconnection has always existed (Anderson, 2009; Jordan, 2015; Kellert, 1997; Wilson, 1984). Wilson (1984) outlines this interconnection highlighting the co-evolution of this relationship.

The foundation of Wilson’s (1984) Biophilia Hypothesis focuses on the evolutionary history of interdependent human/nature development and the resulting bond. Due to this co-evolution, the natural environment supports optimal human functioning, creating an inherent, subconscious human connection to the natural world resulting in a biophilic “innate tendency to focus on life and life-like processes” (Jordan, 2015, p. 9). Wilson (1984) posits that human genetics bonded with the natural world influence our health and identity, and our well-being depends on our relationship with nature.

Kellert and Wilson (1993) extend the Biophilia Hypothesis highlighting the psychological elements arising from the interdependence of human and ecological evolution. Prior to modern living, humans with a greater nature connection increased their potential for survival by responding to cues (e.g., predators, weather, finding food) in the natural world. This nature-based human evolutionary edge, which is dependent upon nature awareness, continues to exist in our modern psyche. Humans express biophilia through our attraction to, identification with, and desire to connect with nature (Capaldi, Dopko, & Zelenski, 2014; Kellert & Wilson, 1993). Because of the human “instinctive esthetic preference for natural environments” (Seymour, 2016, para. 12) resulting from this co-evolutionary relationship, Kellert (1997) argues that diminished biodiversity will negatively affect the human psyche. Sparse nature diversity minimizes mental restoration, weakening mental health.
According to Kaplan and Kaplan (1989) and Kaplan’s (1995) Attention Restoration Theory (ART), exposure to nature restores our mental faculties through effortless attentional engagement. This engagement allows us to return to the attentional demands, or mental focus, necessary for complex environments such as highly active urban spaces. Increasingly urbanized and technological societies require cognitively driven direct attention, which when sustained over extended periods of time cause attentional fatigue, which is an inability to focus or concentrate (Kaplan & Kaplan, 1989; Kaplan, 1995). Exposure to nature, even in attentionally intensive locations (e.g., an inner city), can shift direct (hard) attention, to indirect (soft) attention relieving attentional fatigue and stress (Kaplan & Kaplan, 1989; Kaplan, 1995).

Four components must be present in nature for attentional restoration to occur: soft fascination, being away, extent or scope of immersion, and compatibility (Kaplan & Kaplan, 1989; Kaplan, 1995). Aesthetic and sensory contact with nature encourages soft fascination, relatively effortless attention engaged by interesting objects. Being away, releasing mental occupation and demands related to daily tasks and responsibilities, supports the restorative effect of indirect attention. The extent of nature immersion determines the restorative effects of soft fascination and being away. For example, the restorative benefits of a state park nature hike differ from the restorative benefits of walking on a tree-lined urban sidewalk. Diversity and scope of natural elements, as well as the ability to be present to them, influences restoration. Yet, Kaplan and Kaplan (1989) and Kaplan (1995) note that the expectations of nature exposure must match the actual experience for a positive connection; compatibility between the expectation and experience influences restorative benefits of nature exposures.

How we perceive nature experiences matters as researchers show that a safe and non-threatening perception of the nature exposure is necessary for mental restoration and stress
reduction to occur (Kaplan & Kaplan, 1989; Kaplan, 1995; Kellert & Wilson, 1993; Ulrich, 1983; Ulrich, 1984; Wilson, 1984). Perceptual compatibility along with visual complexity, landscape depth, and species richness and biodiversity “are thought to rapidly evoke automatic positive affective and parasympathetic physiological responses with associated feelings of calmness, relaxedness, pleasantness and fascination” (Jordan, 2015, p.10). Positive affect (subjective experiences of positive emotion) and relaxation (due to the activation of the parasympathetic system) are two factors Heintzman (2010) credits for engaging the spiritual experiences (such as awe and wonder) that some individuals derive from nature exposure. Nature exposure supports spiritual well-being (Hedlund-de Wit, 2013; Heintman, 2010). Expressions of spiritual health include trust, honesty, compassion, service, integrity, and altruism (Hawks, 1994).

Community building and social cohesion require trust, honesty, compassion, service, integrity, and altruism (Guéguen & Stefan, 2016; Matsuoka & Sullivan, 2011; Weinstein et al., 2015; Weinstein et al., 2009). Viewing images of nature increases intrinsic aspirations, internal personal goals supporting basic psychological needs that encourage relationship building and other community-oriented behaviors (Weinstein et al., 2009). Short (less than one minute) bouts in nature influence altruistic behavior (Guéguen & Stefan, 2016) leading to stronger neighbor relations and community ties, fewer incivilities, decreased aggressive behavior, lower levels of violence, and fewer reported crimes (Matsuoka & Sullivan, 2011). Residents living in urban areas with proximity to green space express high levels of neighborhood satisfaction (Van Herzele & de Vries, 2012) leading to overall happiness and perceived general health (Maas, Verheij, Groenewegen, de Vries, & Spreeuwenberg, 2006). Such community cohesion influences productivity and pro-environmental behavior (Weinstein et al., 2015).
Zelenski and Nisbet (2014) show that connection to nature, or Nature Relatedness (NR), has a distinct happiness benefit (Nisbet & Zelenski, 2013). Higher levels of NR influence environmentally responsible behavior (Nisbet, Zelenski, & Murphy, 2009; Nisbet et al., 2011; Nisbet & Zelenski, 2013), possibly because happier people are better able to create and participate in thought-to-action behaviors (urges transformed to adaptive activities) (Fredrickson, 2001). NR and happiness encourage humans to reciprocate environmentally responsible actions (Nisbet & Zelenski, 2013). Human behaviors that positively affect environmental health respectfully fulfill the human reciprocity of the HNR by encouraging ecological sustainability.

**Ecological impacts of the modern Human-Nature Relationship.** Ecological sustainability depends on human behaviors that consider and positively influence the environment (Niemela et al., 2011; Nisbet et al., 2009; Nisbet et al., 2011; Nisbet & Zelenski, 2013; Scannell & Gifford, 2010; Stevenson et al., 2013). A positive correlation exists between nature exposure and pro-environmental behavior (Hedlund-de Wit, 2013; Nisbet et al., 2009; Nisbet et al., 2011; Nisbet & Zelenski, 2013). Hedlund-de Wit (2013) states, “profound nature experiences are...powerful ‘therapeutic tools’...[with] the potential to encourage new behavior patterns and self-perceptions...and may have the capacity to change the way individuals view nature and the world at large” (p. 156). Yet long-term behavior change occurs gradually and requires repeated positive nature exposure (Hedlund-de Wit, 2013), making regular nature experiences for youth important for future human and ecological health.

Nature exposure encourages the development of Environmental Literacy (EL) by tactiley teaching humans about natural systems, how ecosystems sustain life, and human impacts on ecological health (e.g., garbage in nature) (Stevenson et al., 2013). Developing EL occurs by increasing awareness of the interconnectedness of ecosystems (including humans), presenting
systems-level thinking solutions to (human-made) environmental issues, and integrating sustainability thinking and corresponding actions (Hollweg et al., 2011). While it is important for everyone to increase their EL, youth in early adolescence develop EL more quickly than older adolescents (Stevenson et al., 2013) making early environmentally based education important for long term planetary health (Wray-Lake et al., 2010). However, Wray-Lake, Flanagan, and Osgood (2010) show that adolescent environmental attitudes and beliefs, such as recognition of resource scarcity and individual responsibility, have decreased over the last three decades. This is concerning since the time youth spend in nature has steadily declined over the last few decades (Louv, 2008) and urban living, which is rapidly increasing globally, removes people from the natural world (Barondess, 2008; Kellert & Wilson, 1993; Turner, Nakamura, & Dinetti, 2004; Wilson, 1984).

The urban environment limits opportunities for nature exposure and offers minimal biodiversity (Turner, et al. 2004). According to Turner, Nakamura, and Dinetti (2004), “nearby surroundings shape people’s baselines of ecological health” and due to depleted urban biodiversity “[b]illions of people may lose the opportunity to benefit from or develop an appreciation of nature…[resulting in] adverse consequences for conservation in general as well as for humans’ quality of life” (p. 585). Zelenski, Dopko, and Capaldi (2015) add “that modern lifestyles contribute to environmental destruction…by disconnecting people from nature” and encouraging excessive consumption (p. 24).

In the U.S., cultural values of consumption and materialism degrade environmental concerns (Wray-Lake, Flanagan, & Osgood, 2010). The U.S. consumption rate is the highest, per capita, in the world, creating a tradeoff between materialism and environmental protection (Seymour, 2016; Wray-Lake et al., 2010). The illusion of the technofix, the idea that technology
can fix all problems, also lowers environmental concerns (Wray-Lake et al., 2010). Human behaviors driven by such cultural values override environmental concern, consideration, and behavior, producing ecological disease. Symptoms of the imbalance of the HNR include environmental challenges such as climate change, pollution, and species extinction (Zelenski, Dopko, & Capaldi, 2015). Hedlund-de Wit (2013) writes,

[n]ext to worldviews and values, there are also many structural factors, such as economical, infrastructural, institutional, and social-practical ones, that inform environmental behaviors and lifestyles…[i]n this context, demographics such as age, income, and socio-geographical location are thus also likely to play a substantial role. (p. 156)

In the next section, we explore how demographic factors influence the Human-Nature Relationship.

**Demographic Influences on the Human-Nature Relationship**

An infinite range of interconnecting personal and social contexts influence the HNR, which affect human and environmental health. In this section, we discuss the influence of the built urban environment on the HNR, including the effects of socioeconomic status, race, and the role of urban nature. Then, we discuss how gender and age, within these contexts, uniquely affect the HNR.

**Built urban environment.** The built urban environment affects health outcomes via a combination of interconnected factors (Vlahov & Galea, 2002) such as the environment, economics, technology, and social forces (Lawrence, 2011). Pedersen (2015) suggests that the density of urban settings contributes to increased stressors related to noise, light, odor, and vibrations, which link with poorer overall well-being. Urban dwellers suffer from increased
incidences of heart disease, high blood pressure, diabetes, obesity, road traffic accidents, injury, violence; mental health disorders, substance abuse, and exposure to air pollution” (World Health Organization [WHO], 2010, p.1). The expansion of the built urban environment alters ecosystems, resulting in native species loss (McKinney, 2002), and decreased vegetation and open spaces (United States Environmental Protection Agency [U.S. EPA], 2008). Turner et al. (2004) contend that these alterations contribute to the separation of humans from nature. These changes to the natural landscape also lead to rising temperatures within cities, known as the urban heat island effect, which results in increased energy use, decreased water levels, and higher levels of air pollution and greenhouse gas emissions. Per the U.S. EPA (2008), this urban phenomenon is a contributing factor in climate change and global warming affecting the sustainability of the planet and human health.

The impact of the built urban environment on human and ecological health varies from city to city, and neighborhood to neighborhood, affecting diverse populations to differing degrees (Douglas, 2012), and often disproportionately burdens communities of color and low-income neighborhoods (Fitzpatrick & LaGory, 2011; Jennings & Johnson Gaither, 2015). Helmstetter, Brower, and Egbert (2010) highlight that race, income, and the specific community in which one lives strongly impact personal health outcomes. Morello Frosch, Pastor, Sadd, and Shonkoff (2009) explore the heightened prevalence of the urban heat island effect in low-income communities. Residents of these communities suffer from increased incidences of respiratory issues, heat stroke, and heat-related deaths (U.S. EPA, 2008), have a greater risk of exposure to environmental hazards, pollutants (Chakraborty, Maantay, & Brender, 2011), and violence (Fitzpatrick & LaGory, 2011). They also experience limited access to healthy food options (Hilmers, Hilmers, & Dave, 2012), quality medical care, and preventative health services (Moy,
Consequences of these disparities reveal themselves throughout the lifespan, affecting both infant mortality rates (De Graaf, Ravelli, de Haan, Steegers, & Bonsel, 2013) and life expectancy (WHO, 2010). One way to reduce urban health disparities and minimize health inequalities is to increase urban nature availability, use, and access (Jennings & Johnson Gaither, 2015; Mitchell & Popham, 2008).

**Urban nature.** Urban nature includes parks, nature reserves, conservation areas, recreation grounds, rivers, bike and walking trails, community gardens, and street trees (Wolch, Byrne, & Newell, 2014). Matsuoka and Sullivan (2011) argue that many types of urban nature, including wild, intentional, and unintentional (e.g., empty urban lots, vegetation along railroads), have health benefits. Views of intentionally greened vacant lots lower ambulatory heart rate linked with acute stress levels (South, Kondo, Cheney, & Branas, 2015) and reduce certain types of crime such as gun assaults and vandalism (Branas et al., 2011). Larson, Jennings, & Cloutier (2016) show that cities with higher numbers of parks correlate with higher levels of subjective well-being, including better physical health, more community engagement, and a sense of purpose. A positive association exists between higher percentages of neighborhood green spaces (within a 1-3 kilometer range) and perceived general health (Maas et al., 2006). Urban nature also mitigates some environmental concerns associated with urbanization by reducing noise pollution (Dzhambov & Dimitrova, 2014), regulating air and water pollution (Wakefield, Elliott, Cole, & Eyles, 2001), and decreasing the urban heat island effect (Jesdale, Morello-Frosch, & Cushing, 2013). Yet, various factors determine the availability of urban nature, and barriers to accessing and using it, especially in communities of color and low-income neighborhoods.

In a nationwide study, Jesdale, Morello-Frosch, and Cushing (2013) discovered that when compared to non-Hispanic whites, African (52%), Asian (32%), and Hispanic (21%) Americans
are less likely to live in neighborhoods with tree cover, a known tool in reducing the urban heat island effect. Wolch et al., (2014) find that economics influence the distribution of urban nature, whether street trees or parks, limiting urban nature in low-income communities. Even in urban areas which boast numerous quality urban nature spaces, like Minnesota’s Twin Cities Metropolitan (Minneapolis and St. Paul), neighborhood demographics dictate urban green space allocation (Fernandez Campbell, 2016), which in turn impacts urban nature access and use. Despite Minneapolis’s consecutive five year ranking as having the best park system in the country (2012 to 2017) with St. Paul as the close second (The Trust for Public Land, 2017), racial and income inequality within the park systems affect park staffing, access to nature spaces, and the distribution of funding per area (Fernandez Campbell, 2016). Fernandez Campbell (2016) asserts, “The neighborhood parks that get the least money for certain types of recreational spending, such as lessons, supplies, and maintenance, are disproportionately in…[lowest income] communities” (para. 6). Additional barriers to urban nature access and use include the distance one must travel to reach parks and green spaces (Crawford et al., 2008; Rigolon & Flohr, 2014; Wen et al., 2013), amount of biodiversity (Jennings, Larson, & Yun, 2016; Kazmierczak, 2013; Strohbach, Haase, & Kabisch, 2009), and neighborhood characteristics, such as perceived threats to safety (Gearin & Kahle, 2006). These social, racial, and environmental justice issues have implications for both human and ecological health (Wolch et al., 2014), and uniquely affect youth exposure to urban nature (Rigolon & Flohr, 2014) and their HNR.

**Age and gender.** Intersecting demographics of age and gender influence the health of UAW (Gelb, Pederson, & Greaves, 2011; Viner et al., 2012; Wiens et al., 2012). Kaneshiro (2015) discusses the adolescent life stage as a unique time of human development involving drastic biological and psychological growth. During this time, “puberty and rapid brain
maturation lead to new sets of behaviors and capacities that trigger or enable transition in family, peer...educational domains, and in health behaviors” (Viner, et al., 2012, p. 1641). Identity establishment, peer relationships, and bio-psycho changes during this period increase risk-taking behaviors (WHO, 2014). This distinct time of health vulnerability (Flaskerud & Winslow, 1988) has implications for adolescent health across their lifespan (WHO, 2014), especially young women who endure socially enforced gender roles (Gelb et al., 2011).

Young women report lower well-being levels on measures such as perceived health and life satisfaction than their male counterparts (WHO, 2014). Gendered societal roles, expectations, and life experiences influence behavior and health (Gelb et al., 2011). Gender expectations and attitudes along with marginalization, poverty, and/or lack of parental support can predispose young women to poor health and poor developmental outcomes (WHO, 2014). Therefore, opportunities for nature-based mental restoration (Kaplan & Kaplan, 1989; Kaplan, 1995) with its ensuing resilience building (Razani, Meade, Schudel, Johnson, & Long, 2015) and stress reduction benefits (Ulrich, 1983; Ulrich, 1984) could be an avenue toward well-being for this population.

Both passive and active nature exposure (Matsuoka & Sullivan, 2011) provide restoration and minimize chronic stress, one contributor to depression (Hall-Flavin, 2014). The amount of nature available in the living environment negatively correlates with depression and anxiety, particularly for youth (Mass et al., 2009). Passive nature exposure, such as seeing nature through a window, increases attentiveness and stress coping skills (Matsuoka & Sullivan, 2011). Forty-four percent of school-age children (ages eight to seventeen) report succeeding in school as a source of stress (American Psychological Association [APA], 2009). However, passive nature exposure (e.g., a view of nature through a window) positively affects standardized test
performance, graduation rates, and the intention to attend college for high school students (Matsuoka & Sullivan, 2011). Passive nature exposure also reduces hyperactive, impulsive, and inattentive behaviors as well as bullying (Matsuoka & Sullivan, 2011). Active nature exposure, such as a twenty-minute park walk, increases concentration levels for children with ADHD (Taylor & Kuo, 2009). Bratman, Hamilton, Hahn, Daily, and Gross (2015) find that a ninety-minute nature walk decreases brain activity linked to “sadness...behavioral withdrawal and negative self-reflective processes tied to rumination in healthy and depressed individuals” (p. 8567). Being away and soft fascination (Kaplan & Kaplan, 1989; Kaplan, 1995), two mental components missing or weak in people with clinical depression, increase during and following a thirty-minute gardening session (Gonzalez, Hartig, Patil, & Martinsen, 2010). Chawla, Keena, Pevec, and Stanley (2014) show that gardening programs for adolescents build resiliency by decreasing stress, building mastery, and developing support systems. Another type of nature exposure, wilderness programming, offers a range of benefits to adolescent women.

Wilderness programming positively affects the well-being of adolescent women by increasing nature connectedness, self-esteem, and self-concept (identity); challenging traditional notions of femininity and body-image; encouraging empowerment; and building leadership skills and peer bonding (Barton, Bragg, Pretty, Roberts, & Wood, 2016; Ray, 2007; Whittington, 2006). However, UAW with limited financial resources or familial support are less likely to access wild nature or any nature spaces outside of what is available in their local urban environment (Hedlund-de Wit, 2013; Heintzman, 2010), making urban nature an important avenue to nature exposure for this population. Yet, not all people access urban nature comparably.
Seymour (2016) writes, “[o]ne of the main limitations within this field [HNR] relates to the generally perceived idea that public green spaces are freely open to everyone in all capacities” (para. 36). Lloyd et al. (2008) show that age and gender govern suburban green space and park use, combining to dictate a hierarchy of public nature space use. Type of suburban green space (e.g., recreational, unstructured, social) as well as the inhabitants who use, or claim it, determine how the space is used and who uses it. For example, young women who intend to use green space for socializing either leave or change behavior if boys or older adolescents enter their space (Lloyd et al., 2008).

Determinants of suburban nature accessibility and use for young women include safety, the ability to socialize, level of nature, gender, and age (Lloyd et al., 2008). Several studies discuss barriers to urban adolescent access and use of urban nature spaces, green spaces, or parks (Gearin & Kahle, 2006; Gomez et al., 2004; Mahdair, & Dali, 2016; Rigolon & Flohr, 2014). These barriers include personal safety, pollution, green space quality (Gearin & Kahle, 2006), distance, limited park amenities (Rigolon & Flohr, 2014), traffic, and availability of transportation (Mahdair & Dali, 2016). Yet none of these studies focus exclusively on UAW, their access to and use of urban nature, or their relationship with nature. Understanding this population’s relationship with and perspective of nature, especially urban nature, may increase use and access.

Perceptual Influences on the Human-Nature Relationship

In addition to social and individual demographic factors shaping nature exposure and experiences, personal perception drives nature related behavior (e.g., choosing whether or not to use nature) often limiting urban nature use (Nisbet & Zelenski, 2011). In this section, we examine how affective forecasting errors affect personal awareness of the benefits of urban
People “systematically underestimate” the benefits of urban nature exposure due to affective forecasting errors (Nisbet & Zelenski, 2011, p. 1101). These perceptual errors prevent urban residents from accessing urban nature spaces, especially youth who already underuse nature (Louv, 2008). Affective forecasting is the psychological process of predicting our future emotional states and behaving accordingly (Wilson & Gilbert, 2005). Nisbet and Zelenski (2011) find that errors in our affective forecasting, or our inability to properly predict our emotional state during future nature encounters, limits time spent in nature and decreases future nature contact. They state, “[p]eople may avoid nearby [urban] nature because a chronic disconnection from nature causes them to underestimate its hedonic [pleasant] benefits” (Nisbet & Zelenski, 2011, p. 1102). Affective forecasting errors and other perceptual factors (e.g., values and belief) influence the HNR through the filters of personal demographics including age.

Youth perceptual barriers to accessing urban nature include actual and perceived adult presence and youth perception of adult assumptions of them (Travlou, Eubanks Owens, Ward Thompson, & Maxwell, 2008), park availability, quality, maintenance levels, personal safety, peer use (Gearin & Kahle, 2006; Ries et al., 2009) and type of urban nature (Gearin & Kahle, 2006; Lloyd, et al., 2008). Gearin and Kahle (2006), reporting on perception and green space use for urban adult and adolescent residents, highlight the difference in perception between the two cohorts regarding park and green space design. One major difference between youth and adult perceptions of urban nature is that youth prefer “greened spaces” to socialize and relax in, rather
than activity-focused recreational parks, which is the adult perception of teen park needs (Gearin & Kahle, 2006, p. 25). Recognizing that adults and youth desire different features from urban parks and green spaces highlights the importance of asking youth their opinions while designing public urban nature spaces (McCray & Mora, 2009). According to McCray and Mora (2009) connecting adolescents with urban nature requires understanding the types of nature areas they prefer to use and perceive as accessible.

To feel connected to a place, such as urban nature, individuals need a space that they want to return to (Frumkin, 2003). According to Frumkin (2003), perception and experience drive individual choice regarding type of locations to inhabit and with which to develop a sense of place. Sociologists define sense of place as a fusion of perceptual interpretation of and emotional response to a specific space, creating and ascribing personal meaning to it (Cross, 2001). Sense of place directs space and activity choices as well as feelings of safety (Frumkin, 2003). These spaces hold “profound social meaning” mirroring personal identity (Fitzpatrick & LaGory, 2011, p. 4), which is particularly important to adolescent psychological development (Kanshiro, 2015). Sense of place and the resulting attachment to it encourages environmentally responsible behaviors (Vaske & Kobrin, 2001). Therefore, assisting UAW in developing a sense of place with urban nature spaces supports their development as well as ecological health. Furthermore, involving UAW in urban nature planning may improve their physical, mental, and social health by creating spaces which suit their needs, that they feel connected to and a part of, and that they want to use (McAllister, 2008).

Since human perspectives of nature shape the HNR (Gearin & Kahle, 2006; Kaplan & Kaplan, 1989; Kaplan, 1995; Nisbet & Zelenski, 2011) which governs human and ecological health and well-being (Kaplan & Kaplan, 1989; Kaplan, 1995; Kellert, 1997; Seymour, 2016;
Ulrich, 1983; Wilson, 1984), acknowledging and understanding the perspectives particular populations have of nature, including urban nature, is important (Seymour, 2016). Currently, there is a gap in the literature investigating the HNR of UAW and urban nature. A phenomenological inquiry asking about, listening to, and learning about UAW’s HNR offers insights into understanding young women’s experiences and improving their health and well-being while also providing foundational information that researchers are lacking.

**Summary**

Humans evolve with nature, inherently connecting with it (Wilson, 1984). Because of this relationship, humans receive a broad range of health and wellness benefits when they experience nature (Maas et al., 2006; Marcus & Barnes, 1999; Matsuoka & Sullivan, 2011; Razani et al., 2015; South et al., 2015; Taylor & Kuo, 2009; Van Herzele & de Vries, 2012). Reciprocally, nature benefits from a strong HNR when people who understand and identify with nature behave in ecologically sustainable ways (e.g., recycling) (Hedlund-de Witt, 2013; Nisbet et al., 2009; Zelenski et al., 2015). Contextual circumstances (i.e., demographics) affect this relationship (Berry, 2002; Galea & Vlahov, 2005; Heintzman, 2010). For example, urbanization disrupts the HNR (Berry, 2002; Galea & Vlahov, 2005) by limiting nature access for urban dwellers (Heintzman, 2010), in particular those who experience resource barriers (e.g., financial, transportation) (Wen et al., 2013) or live in low-income communities (Wolch et al., 2014). Age and gender also influence the HNR as young women experience a use hierarchy, adjusting their behaviors and location in relation to other nature space occupants (adults, older youth, boys their age) (Lloyd et al., 2008). Urban green spaces offer nature exposure to UAW (Douglas, 2012; Jennings & Johnson Gaither, 2015; Jennings et al., 2016; Jiang, Li, Larsen, & Sullivan, 2014; Kazmierczak, 2013; Lawrence, 2011; Matsuoka & Sullivan, 2011; Mitchell & Popham, 2008).
However, adolescent women underuse these spaces (Lloyd et al., 2008). While social factors (e.g., the people using nature spaces) limit adolescent women’s use of suburban nature space (Lloyd et al., 2008), personal perception of these spaces may also limit use due to inaccurate understanding of nature’s benefits (Nisbet & Zelenski, 2011).

Understanding this population’s relationship with nature, especially urban nature, builds a foundation of information to assist communities, researchers, and policymakers improve nature use and access for UAW in ways that are meaningful to them. Expanding nature use and access for this population increases nature-related health benefits and mitigates potential health disparities (Mitchell & Popham, 2008). UAW’s nature use improves long-term environmental health and sustainability (Hedlund-de Witt, 2013; Nisbet et al., 2009; Zelenski et al., 2015). Therefore, the purpose of this study is to conduct a phenomenological inquiry into the lived experience of urban adolescent women to describe their Human-Nature Relationship, especially with urban nature. The question directing our basic research project is: What is the lived experience of urban adolescent women’s Human-Nature Relationship?
Lenses

The purpose of this chapter is to bring into focus the lenses informing the selection, design, implementation, and interpretation of our research project. We present this chapter to orient the reader to our perspectives and to claim our biases. Transparency of our personal, professional, and shared theoretical lenses lends credibility to our work and assists other researchers in understanding and evaluating our work from this perspective. Additionally, critique and insight from other research perspectives can challenge and enhance our work as we move forward, exposing biases invisible to us. Opening this dialogue strengthens communication and information within the research community.

Paradigm and Culture of Inquiry

A paradigm, one component of the research design, orients the research(er) within a set of perspectives. Rallis and Rossman (2012) write that the paradigm influences “what you focus on to learn more about, how you come to know that world more deeply, and the relevance of what you learn to your world and others” (p. 28). The assumptions of particular paradigmatic perspectives inform the selection, design, implementation and interpretation of each project. The conceptual framework of this project engages both critical and constructivist paradigms (Bentz & Shapiro, 1998; Guba, 1990). These lenses highlight a world that is inseparable from human agency and subjective experience.

Assumptions of the critical paradigm include a subjective epistemology where what is known/knowable is acquired through personal experience. While, ontologically, objectivity is not possible, a matrix of power and control tether people to one another in a fixed reality. Tools such as consciousness raising and an exposure of essential truths disassemble this matrix,
breaking down false and oppressive status quo. Axiologically, the critical paradigm seeks to liberate through consciousness raising (Bentz & Shapiro, 1998; Guba, 1990).

Assumptions of the constructivist paradigm include a process-based epistemology where what is knowable surfaces through the subjective interaction between the knower and the known. The ontological basis for reality(ies) is subjective relativism, where the only reality is in the mind, and subjective consensus creates external reality(ies). The axiology of the constructivist paradigm seeks to not only peel back layers of reality, but also dismantle the elements of these layers, exposing assumptions, the biases of objectivity, and the existence of paradoxes (Guba, 1990).

These lenses (the critical and constructivist paradigms) inform the epistemological (subjective truth learned from a population through the process of interviewing), ontological (inquiry focused on personal perspective of social constructs), and axiological (valuing, listening to, and learning from systematically marginalized voices of urban adolescent women) assumptions of this research and guide the project selection, design, implementation, and interpretation. The lived experience of young women and their relationship with nature, especially urban nature, is the basis for this inquiry (selection); they are the experts equipped to inform us about this(these) reality(ies) (design) (Moustakas, 1994). In listening to their stories (implementation) and disseminating our research findings (interpretation), we attempt to make space in a broader, public arena for their voices, and to incorporate them into decision-making processes affecting their lives. Simultaneously, we hope participation in this research process sparks inspiration for new ways of knowing themselves within and in relation to the ecological world. These biases root our project in the Interpretivist/Radical Change quadrant of academic inquiry (Guba, 1990).
To accomplish our paradigmatic goals, we selected a phenomenological culture of inquiry to shape the research design. Phenomenology is the thoughtful study of conscious, lived and/or existential experience describing the essence of human meaning in the lifeworld gathered through personal telling, with the aim of understanding phenomena on their own terms (Bentz & Shapiro, 1998; Brinkmann & Kvale, 2015; Moustakas, 1994; Van Manen, 1990). Bentz and Shapiro (1998) write

Phenomenology attempts to rid us of ideas which we sometimes take for granted…[in order] to grasp them in their most essential nature as they appear to consciousness prior to the constructs, ideologies, and myths that we make about them. (p. 97)

People take the Human-Nature Relationship (HNR) for granted because nature is deeply embedded in our daily experiences. It is especially difficult to notice nature against the backdrop of the urban setting. Therefore, we selected a phenomenological design and method to implement our research as it brings the participants’ lived experiences of the HNR into conscious awareness, particularly within the context of the built urban environment.

The philosophical roots of phenomenology also influence our interpretation of this research. Interpretive Phenomenological Analysis (IPA) acknowledges the paradox of needing an interpreter to learn, understand, and report a phenomenon while simultaneously allowing the phenomenon to speak for itself (Pietkiewicz, & Smith, 2014). As researchers, we bracket our experiences, desires, and preconceived notions of young women, nature, and urban nature allowing the essence of their HNR to surface while owning that our biases still influence interpretation. This occurred during data analysis when we recognized participant reflections that represent deductive theoretical ideas (e.g., soft fascination, being away), yet bracketed our understanding of these ideas to remain true to the phenomenon as the participants presented it.
Along with our paradigms and culture of inquiry, three theoretical frameworks influenced the selection, design, implementation, and interpretation of our study.

**Theoretical Lenses**

Three theoretical frameworks provide the foundation for this research: Biophilia Hypothesis, Critical Social Theory, and Holism. In this section, we discuss these theories to assist readers in understanding the ideas and assumptions underlying this project. We discuss how each theory relates to the selection, design, implementation, and interpretation of our study.

**Biophilia hypothesis.** Wilson’s (1984) Biophilia Hypothesis asserts that humans evolve with and from nature. Due to this co-evolution, the natural environment supports optimal human functioning, creating an inherent, subconscious human connection to the natural world. Psychologically humans seek out nature and other living things to connect with, thereby supporting human biopsychosocial and spiritual well-being. This well-being inspires humans to connect with and care for nature by perpetuating healthy ecosystems and ecological sustainability. Reciprocity, a mutually beneficial, bi-directional relationship, occurs between friends; humans love and support nature, and nature loves and supports human health and evolution. Inspired by the beauty and balance of reciprocity, we design and implement this research to mirror it. We strive to create a research environment where our participants feel engaged in a mutual process with us rather than feeling like objects that are being observed and studied. We chose open-ended interviews to accomplish this goal, allowing our participants’ humanity and agency to surface (implementation). We incorporated their expertise into the beginning stage of data analysis by providing them interview synopses during a follow-up meeting to provide feedback and approve potential response quotes (interpretation). Similar
themes (e.g., subjectivity, human agency) arise within critical social theory and affect the selection, design, implementation, and interpretation of this research project.

**Critical social theory.** Critical Social Theory (CST) “attempts to understand, analyze, criticize, and alter social, economic, cultural, technological, and psychological structures and phenomena that have features of oppression, domination, exploitation, injustice, and misery” (Bentz & Shapiro, 1998, p. 146). CST asserts that changing or eliminating structures of oppression, both macro (global, national) and micro (individual perception), enhances freedom, justice, and happiness. Exposing and critiquing dominant ideological assumptions shifts oppressive structures (e.g., objectification). Acknowledging and understanding context, including personal and social history and demographics, is paramount in CST.

Aligned with the values of CST, the selection, design, and implementation of this research focuses on listening to a particular population—urban adolescent women (UAW)—describe their lived experiences through the process of interviews. The framework of CST honors phenomena of specific social groups without requiring generalizability of this knowledge; therefore, singular or numerically limited research participants reporting subjective experience is valuable. This influenced our choice of a phenomenological interview method (design). Our research implementation (open-ended interviewing) honors both phenomenological principles (allowing the phenomenon to speak for itself) and CST’s focus on listening to and learning from subjective experience. As the interviewers, we employed reflexive techniques to recognize and minimize the impact of researcher effect (due to our own biases and/or power dynamics in the interviewer/interviewee relationship) on the interview process (implementation).

As researchers, we are products of a social and historical context of values that shape this research (third wave feminists exposed to the first wave of environmental movements). CST
requires that we understand our social and historical selves and how this context affects our view of, and actions in, the world. As researchers, this self-awareness allows us to bracket, or know and put aside, our story to open up to hearing another’s story while being aware of how our own perspective affects how we hear and interpret another’s story. In this way, CST informs our phenomenological interpretation because it provides the container for UAW to speak for themselves, and report their experiences and perspectives in their words regarding their HNR.

It is important to note that while the purpose of CST is pragmatic social change (rather than mere interpretation), the purpose of phenomenology is to construct an unbiased description of a lived experience, purely for the sake of description. We highlight this conflicting intersection of our theoretical lenses to recognize, name, and honor this tension in our project design.

**Holism.** The ecological concept of holism roots itself in understanding the totality of the whole system rather than the reduction of systems into the sum or its parts (Micozzi, 2015). Through this integrated understanding, we selected, designed, implemented, and interpreted this research. Micozzi (2015) states that “Modern society, embedded and invested in technology has led us away from the natural environment and relations we as human organisms have with our own planet and the universe beyond” (p. 14). These ideas align with our selection to research the HNR, not only to explore what this relationship looks like for UAW but also to raise awareness around the disconnection from nature that modern living encourages. Simply asking questions about the HNR increases thought processes about self, nature, and their relationship, which may increase awareness of the interconnection of humans and nature.

In this holistic understanding we embrace the possibility of consciousness raising that could and did occur within us as researchers. Ratner (2008) explains that “Holism regards
individuals or elements as reciprocally influencing each other” (p. 2). Our process of designing and implementing this research honored the relationship that occurs between researcher and participant. We approached this research process as a reciprocal learning and teaching experience. It was not simply our role to be researchers collecting data.

Additionally, holism considers the influence of context on phenomena. By analyzing the unique role of the individual participant’s experience within the collective experience, we aimed to acknowledge and understand the multitude of factors that influence the phenomena such as people and conditions (Ratner, 2008). Without considering how the demographics of urban living, age, and gender affect the experience and expression of the HNR, we could not understand the HNR. Without these dynamic and interconnecting elements, the participant's experience would not exist in the way that it does. Holism acknowledges that “knowledge of things requires understanding elements as complex, multifaceted entities” (Ratner, 2008, p. 2).

When comparing individualistic versus holistic methodologies for research, Ratner (2008) contends that, “A sum treats each response as separate and independent. Sums are individualistic...while patterns are holistic” (p. 5). While interpreting the data, this holistic approach allowed us to seek out relationships, pattern categories, and themes rather than reducing the individual participant’s experiences as isolated and separate phenomena. In our interpretation, the individual's experiences are woven together to create the story, or whole, of the phenomena. Without each part, the whole would not exist, but the whole cannot be reduced to the single parts because it is the whole that makes it what it is. Our interpretation is a new understanding, differing from the individual experience alone, but made up of the individual experience.
Personal and Professional Lenses

In this section, we each discuss personal and professional lenses informing this research. We claim and lay bare our personal and professional experiences, which shape our lenses and how they relate to the selection, design, implementation, and interpretation of our study.

**Shyla A. Earl.** The interconnections of my personal, academic, and professional experiences inform and influence one another, and ground my critical and constructivist paradigms. These experiences stem from my spiritual relationship with the universe. This ever-evolving relationship is cyclical and interwoven, mirroring patterns of the natural world. It is paradoxical. Surrendering to it conjures unconditional support, birthing opportunity and illuminating mystery. Experiencing the universe in this way inspires me to learn how others perceive and experience it, particularly its concrete manifestation—nature. My lived experience of a nature-based spirituality influences my decision to study the HNR (selection) through phenomenological interviews (design and implementation), which supply personal nature insight.

My personal relationship with nature and gender started before I was consciously aware of such concepts. Early experiences as a young woman quickly shaped my perception that the world did not hear me. I select, design, and implement this research to hear from and listen to young women. Gendered roles did not resonate with me, yet I was fully aware of the expectation(s) to perform them. I do not ascribe to the idea of binary gender and my experiences differ from this socially prescribed reality. This influences our inclusive recruitment of people identifying as female in this research. I do not resonate with restrictive boxes nor manufactured processes. My wildness embraces the organic expressions and manifestations of life. My biophilia, or love of life, continues to sharply contrast the prescribed, commercialized, and
consumption-oriented society surrounding me. This place of tension in my life influences the selection (young women’s HNR), design (phenomenological interviews), and implementation (phenomenological interviews) of this research as I value nature, young women, and building reciprocal relationships through honoring subjective experience(s).

What I value led and continues to lead me on my academic path of gender studies, philosophy, and currently, holistic health. Within these areas of study, I find my voice, the paradigms that resonate with my lived experiences, and space for myriad manifestations of nature-based healing. Each of these areas of study, individually and collectively, teach me to honor, listen to, and learn from many voices, stories, and lived experiences influencing all facets of this research project.

Active listening to personal stories is foundational to my professional work as a birth doula and herbalist inspiring the design and implementation (phenomenological interviews) of this research. My professional background includes supporting women in a variety of health and human service areas focused on reproductive rights, birth doula support, and resource allocation. Intertwined with my health and human service work is my professional experience as a sustainable farmer and an herbalist. My herbalism studies, beginning in adolescence, are the fulcrum of my relationship with nature. My learning process began with eating wild plants as a child. It evolved to reading books and experimenting with dried plant material, then to identifying plants, cultivating them, wild harvesting, and urban foraging. My desire to develop a professional herbal practice led me to the Masters of Arts in Holistic Health Studies program at St. Catherine University and this research project.

Through connecting with plants in their world, I learn from weeds rather than attempt to eliminate them. They are our allies, signaling to us and offering themselves to assist in healing. I
selected researching the HNR to raise human consciousness regarding plant (and planet) sentience. As we attune with plants we attune with ourselves, which assists healing not only for ourselves but also for the planet. My relationship with plants, the natural world, and the universe inspires me to research the perception(s) people hold of nature, the effect nature has on them, and to participate in re-connecting the HNR. By researching the perspectives UAW hold of their HNR, including urban nature, I can better understand one path to rebuilding the HNR.

**Erin Heinitz.** A multitude of factors (e.g., culture, family, education, individual life experiences, work history) influence my personal and professional lenses, blending together to create my understandings of reality. It is from this reality that this research emerged. Therefore, these understandings influenced the selection, design, implementation, and interpretation of this project.

As a lifelong learner and a pursuer of education, my academic experiences have and continue to influence the development of my personal and professional lenses. The way I live and understand the world, from striving to be a conscious consumer to making environmentally responsible choices, has roots in my educational background. My undergraduate studies in sociology developed my critical thinking skills and awakened me to the many problematic social structures and ideologies that exist within society. For example, consumerism and capitalist systems lend themselves to inequality and a disconnection between humans and the natural world. Through this critical paradigm understanding, I began to see the possibility and need for transformation within society and myself. I began to function through a lens where mindful choices (e.g., supporting local farmers and food cooperatives, volunteer work, self-care) to better help the community, nature, and myself were central.
While studying abroad, I interned at a nature and sustainability center. This experience opened me up to the field of Ecotherapy and widened my understandings of environmental responsibility. These academic experiences, enhanced my commitment to environmental and social justice, and influenced my desire to conduct research that worked toward social change by bringing awareness to the importance of the HNR. These experiences also influenced the interpretation of this research, which emerged from an understanding of nature as a tool for healing while also acknowledging the disruption to the nature relationship that results from modern urban living.

Also during my undergraduate education, I had the opportunity to conduct and analyze qualitative interviews with community members in a study that explored sense of community in two Midwestern rural towns. Through this process, I became fascinated by hearing about people’s unique experiences, understandings, and perspectives. This experience exposed me to the connection and learning that one-on-one interviewing provides; and thus, influenced the implementation of this research.

I grew up in a small town in southern Minnesota that provided me with access to nature; a space that nurtured my creativity, engaged me physically (I loved to climb trees!), and allowed freedom to explore without some of the barriers associated with urban living. I feel fortunate to have had these experiences; however, this time spent in nature dwindled as I reached adolescence. Various life demands (e.g., school, extracurricular activities, work, social life) pulled me away from connecting with nature. As I reached young adulthood, I began to rekindle this relationship. On a personal level, I experienced a nature awakening; while lying under a tree one summer afternoon. This experience brought about a heightened attunement with the vibrancy, depth, and beauty in nature that I had never felt before, and has affected my
relationship with nature ever since. This shifting relationship, along with my professional background working one-on-one with children and adolescents in social services and mental health encouraged my curiosity in learning about the HNR of today’s adolescents, especially as technology becomes an ever-present part of daily life. By collaborating with this population, I hoped to gain a better understanding of their HNR.

I have experienced first-hand the restorative effects of the nature experience, both personally and professionally. Spending time in nature helps me to reduce stress, tune into my present experience, and feel more connected. Additionally, this research project itself has created a shift in consciousness by deepening my awareness of, engagement to, and connection with urban nature. I have also experienced the restorative benefits of nature on a professional level. While working in a day treatment program for children with various mental health concerns, I witnessed the healing power that nature had for many of the clients, as this particular program emphasized the importance of spending unstructured time in the outdoors. All of the factors discussed in this section supported my interest in researching the lived nature experience of urban adolescents. I hope that young people in today’s world can cultivate a connection with nature, not only for the personal and community health benefits but also for the health of the planet.
Method

The purpose of this chapter is to describe the phenomenological method we used to answer the research question “What is the lived experience of urban adolescent women’s Human-Nature Relationship?” We begin this chapter by offering rationale for our project design, including culture of inquiry, method, and data type. Next, we discuss the sampling procedures by describing our population, sampling methods, and recruitment process. Then, we explore the instrumentation we used within this study, including reliability and validity. From here, we discuss data collection procedures, detailing each step of this process. Next, we outline our data analysis procedures. Then, we explore how we demonstrated rigor within this project. We then include a discussion on the protection of human subjects. Finally, we elaborate on the limitations of our specific research design.

Rationale for Research Design

We employed an emergent qualitative research design, grounded in the phenomenological culture of inquiry and rooted in the critical and constructivist paradigms. Assumptions of the critical paradigm include a subjective epistemology, a non-objective, yet fixed ontology, and an axiology of liberation (Guba, 1990). The constructivist paradigm assumes that reality is a subjective process composed of and creating multiple realities which we can learn about and deconstruct. We discussed these perspectives in our Lenses Chapter. Below, we discuss phenomenology and our rationale for choosing it as a culture of inquiry and methodology.

Rationale for phenomenological culture of inquiry. Phenomenology is the thoughtful study of conscious, lived and/or existential experience describing the essence of human meaning in the lifeworld gathered through personal telling (Moustakas, 1994; Van Manen, 1990).
Following a rigorous discernment process, involving multiple qualitatively-oriented cultures of inquiry, we decided to ground this research in the phenomenological culture of inquiry. We first considered Critical Social Theory as a potential culture of inquiry since our paradigm and initial researcher lenses echo its theoretical roots, including an axiology of liberation related to quality and equitable access to urban nature for urban adolescent women (UAW). However, while discussing this axiology, including the empowerment of UAW regarding use of and access to urban nature, we discovered our biases regarding the Human-Nature Relationship (HNR) (e.g., people like nature, want access to nature, are conscious of their relationship with nature) and we did not want to assume that UAW relate to nature, including urban nature, in this way.

To learn how UAW relate to urban nature and view their relationship with nature, we asked them to describe their lived experience of urban nature and perceptions of their HNR. We could only learn this from UAW themselves. Therefore, we chose the phenomenological culture of inquiry to ground our research as it pulls into consciousness the essence of the HNR between UAW, nature, and urban nature through the lenses of the young women.

Strengths of phenomenology include the ability to call into question the assumptions of social and cultural norms in the effort to understand a thing as itself rather than through these lenses (Bentz & Shapiro, 1998; Brinkman & Kvale, 2015; Moustakas, 1994; Van Manen, 1990). Phenomenology does not problem solve; it simply pulls back layer(s) of presupposition(s) to expose the essence of a thing providing insight into the meaning-making processes individuals ascribe to phenomena (Bentz & Shapiro, 1998; Brinkman & Kvale, 2015; Moustakas, 1994; Van Manen, 1990). It seeks to understand meaning rather than build facts (Moustakas, 1994) or explain causation (Bentz & Shapiro, 1998).
One risk of the phenomenological search for meaning is the potential for missing cultural contexts, consciousness, and experiences (Van Manen, 1990). Researcher cognizance and research design can mediate these issues; however, it is important to acknowledge the subjective stance of this form of research. Additionally, phenomenology is subject to accusations of solipsism because of its personal and interpretive nature (Bentz & Shapiro, 1998; Moustakas, 1994). The phenomenological framework of inter-subjectivity addresses this concern by recognizing the interdependence of the perceiver and the perceived, including “perception of the other by analogy” (Moustakas, 1994, p. 37). The complexity and variety of the phenomenological approach allow for “obfuscation and methodological criticism” (Bevan, 2014, p. 143), particularly from the perspectives of positivist and post-positivist paradigms and deductive quantitative disciplines.

**Rationale for method.** The method for this research was an in-depth, face to face, one on one, open-ended, semi-structured, responsive interview (Brinkmann & Kvale, 2015; Cresswell, 2014; Rallis & Rossman, 2012; Rubin & Rubin, 2012). The interview process was flexible and reflexive allowing participant perspectives to emerge freely without prescribed expectations (Brinkman & Kvale, 2015; Cresswell, 2014; Rubin & Rubin, 2012). We employed a “one on one” approach to this process since “[a]n interview is literally an inter-view, an inter-change of views between two persons conversing about a theme of mutual interest.” (Brinkman & Kvale, 2015, p. 4). However, it is important to note the asymmetrical power dynamic of the interview, where the researcher initiates and defines the interview, determines the topic and questions, and concludes the interview, as well as interprets the interview data (Brinkman & Kvale, 2015). To minimize this dynamic, we instituted a flexible approach in our questioning and interpretation, encouraging the participant to share information relative to themselves (relating to the interview
theme) through open-ended questions, which we designed to elicit participant experience rather than lead them toward a specific answer. During a follow-up meeting, participants checked analysis for accuracy.

Semi-structured, open-ended interviews were the best method for answering this research question because they provided a loose and shifting container through which the unique lived experience and perspectives of the urban adolescent women organically surfaced. Interviews are the best way to receive, interpret, and understand the phenomenon of unique individual lived experiences, particularly while describing the ubiquitous yet innocuous human nature relationship within the urban environment. According to Rubin and Rubin (2012), “[q]ualitative interviewing projects are especially important when the processes being studied are nearly invisible,” such as the HNR and perspectives of it (p. 5).

Strengths of this approach include the ability of participants to describe their human experience as they experience it (Bentz & Shapiro, 1998) including historical and contextual information particular to them (Creswell, 2014) and their relationship with nature. Such descriptive data allows for creative responses and the emergence of themes for analysis (Creswell, 2014).

Limitations of this approach include subjective bias; data presented through personal filters may not represent an objective truth. Another potential limitation is response bias where participants present data with the intention of meeting the perceived expectation of the researcher, rather than purely stating their experience(s). Articulation and perception bias, other possible limitations, occur when participants are unable to describe or interpret their experiences fully through the research methods used (e.g., interviews). Location bias, where data collection
does not occur in “the field” or a controllable laboratory, is also a potential limitation (Creswell, 2014).

**Sampling**

This section outlines this study's sampling procedures by describing the target population, our inclusion and exclusion criteria, the specific procedures of purposive and convenience sampling, and the recruitment process for obtaining our sample.

Urbanization, age, and gender affect access to and relationship with nature (Galea & Vlahov, 2005; Gearin & Kahle, 2006; Heintzman, 2010; Lloyd et. al., 2008; Mahdair & Dali, 2016; Wen et al., 2013), which affects personal, community, and environmental health (Berry, 2002; Niemela et al., 2011; Jordan, 2015). We focused on the particular population of UAW between the ages of 13-18 to better understand their unique lived experience of the HNR. However, in remaining true to our paradigms, we expanded this to female-identified participants to include participants who do not align with gender binaries. The exclusion criteria included persons identifying as male, outside the age range of 13-18, who live in a non-urban setting. We set these criteria to bracket gender, age, and geographic location influences on urban nature perception and use. Additionally, we excluded non-English speakers due to our language limitations.

For this study, we used purposive and convenience sampling. Cresswell (2014) states that, “The idea behind qualitative research is to purposefully select participants or sites...that will best help the researcher understand the problem and the research question” (p. 189). To achieve this, we initially began with purposive sampling, a procedure characterized by “a series of strategic choices about with whom, where, and how one does one’s research” (Palys, 2008, p.697). We purposefully selected community organizations and schools that could open avenues
for connecting with our target population. We had difficulty forming partnerships with community organizations due to a variety of factors (e.g., time and staffing constraints, lack of participant follow through). To expand our sample size, we also used convenience sampling to select two participants based on easy accessibility (Elliot, Fairweather, Olsen, & Pampaka, 2016).

Purposive sampling was the best sampling procedure for our phenomenological study because it increased the opportunity to connect with and learn about the lived experience of our target population (Moustakas, 1994; Van Manen, 1990) while emphasizing the importance of understanding the unique experiences of individuals (Palys, 2008). This approach differs from other forms of research, such as random probability sampling that aims at generalizing participants’ experiences. Convenience sampling helped to enrich the diversity of our sample while allowing us to quickly and easily obtain two more participants.

Limitations of these sampling procedures include the non-generalizable nature of the data and researcher bias as the researcher makes a judgment about where and how to obtain participants. Because we used purposive sampling, most of our participants were members of the same community program and lived in the St. Paul area. A benefit of this was the ease of working with the program’s schedule, which provided consistent meeting times and location. However, a limitation emerges from participant bias. For example, many participants talked about wilderness nature excursions within the community program. These shared experiences could support the HNR of this sample, which may not be representative of the general population. Scheduling interviews with the two convenience sample participants proved more difficult as we did not have the support of a community program to arrange interview times and locations.
The recruitment process for this study began by first researching and identifying schools and community organizations that serve urban adolescent women in Minneapolis and St. Paul, Minnesota. To gain access, we first sought out individual contacts by phone or email within the organizations and schools (Creswell, 2014). This technique allowed us to inquire if there were UAW who fit the inclusion criteria and were interested in taking part in this study. It also provided a buffer to the population— an important ethical consideration when working with a vulnerable population.

We sent organizations an Invitation email (Appendix A) explaining the study and inviting them to participate. This email included an attachment with additional information describing the study, our recruitment process, their responsibilities as a partnering agency, potential risks of participating in the study, and steps taken to minimize these risks (Appendix B). If interested in a partnership, we asked agencies to fill out and return a Document of Approval (Appendix C), attached to the Invitation email. We also attached flyers describing the study, how to participate, and researcher contact information (Appendix D) to the Invitation email. Once we identified interested participants from our target population, we partnered with the organization contact to schedule 30-minute informational sessions.

This session provided an opportunity to explain the details of the study and complete an initial screening process to determine participant eligibility. During the session we explained the purpose of the study and that we were interested in learning about their lived experience of the HNR and urban nature. We informed participants that interviews are a helpful tool to learn about their unique perspective, how they see, think about, engage (or do not engage with) and relate to nature spaces in the city. Participants had the opportunity to view the interview schedule. We notified them that the interview questions would help to direct the interview. However, we are
most interested in understanding what is significant to them regarding urban nature, as they are the only experts of their reality. From here, we outlined the time commitment for participation in the study, the timeline of the project, the steps involved in this process, and how we protected private information. We informed them of the incentives we offered (i.e., $10 gift card) for participation and the steps to receive the incentives. Next, we explained that participation required written consent, from both participants and a parent or guardian.

We also began our consent process during the informational session with potential participants. Once we established interest and suitability of the participant, we distributed parental consent and assent forms (Appendix E & F). We instructed participants to return these forms to us via the community organization contact, or in-person before the interview. From here, we worked with the organization contact to arrange interview times and locations.

We purposively recruited 8 participants through one community organization. We conveniently recruited the two remaining participants, one through face-to-face contact and the other through social media. For the latter two, we did not complete in-person information sessions. We communicated via email to explain the details of the study, answer questions, and schedule interviews. All other steps aligned with our initial recruitment process.

Instrumentation

This section outlines the instruments used in this study: a demographic questionnaire, interview schedule, and researcher as instrument. We provide descriptions, discuss development procedures, and present use and reliability/validity of each instrument in three subsections.

Demographic questionnaire. First, to describe our participants, we collected demographic information including a participant-chosen pseudonym for confidentiality. We developed a brief seven item paper questionnaire (Appendix G) to gather minimal, albeit
important demographic data to provide participant context rather than quantitative data for statistical description. We used this tool as a quick and noninvasive way to establish demographic details about our participants and as a gateway for them to start thinking about the basic interview themes. This tool, while simple and quick, is limited in the amount, type, and depth of information it gathers. The demographic questionnaire went through two stages of edits; the first following professor feedback and suggestion and the second following two pilot tests with adolescent women independent from our study sample. Adolescent feedback prompted us to minimize and simplify the questionnaire. The reflexive evolution of the demographic questionnaire establishes rigor while honing this tool.

**Interview schedule.** We used an interview schedule, a list of questions, to elicit responses during the interviews (Moustakas, 1994). We employed a semi-structured, open-ended, five-question interview schedule (Appendix H), allowing participants to freely describe their experiences of a theme within the container of the questions (Brinkman & Kvale, 2015; Cresswell, 2014; Rubin & Rubin, 2012). We developed the interview schedule based on phenomenological interviewing principals (Bevan, 2014; Brinkman & Kvale, 2015; Cresswell, 2014; Englander, 2012; Moustakas, 1994; Rubin & Rubin, 2012), beginning with the icebreaker question: “What does the word nature mean to you?” Next, we asked the participants to “Describe a time when you experienced nature.” We followed this question with “In the city, do you feel nature is available to you? How does this affect your relationship with nature?” and then “Please describe your experience of urban nature.” We concluded with the question “Is there anything else related to this topic that you would like to tell us?” Our intention with the closing question was to elicit any additional information from participants regarding their HNR and to begin the closure of the interview (Creswell, 2014). This instrument was appropriate for the type
of open-ended, semi-structured, emergent, and responsive qualitative interviews we conducted because it allows for untethered expression.

Strengths of this instrument include providing a container for the interview conversation. It also aided participants in thinking about the phenomena they described. Limitations include the potential for an interview schedule to direct rather than lead participant responses. To support strengths and minimize limitations, each researcher pilot tested the interview schedule with an adolescent woman independent from the sample. During the two pilot tests, the adolescent women both revealed a difficulty conceiving the word relationship outside of a romantic context. This and other pilot-participant feedback, along with a rigorous researcher discussion involving interview and phenomenological principles and professor feedback, assisted in the adjustment of the interview schedule and led to the creation of a tool better able to elicit rich descriptions from the participants. The interview schedule was consistent across all interviews, supporting reliability.

**Researcher as instrument.** Researcher as instrument pertains to the processes we, as researchers, employed to prepare ourselves for conducting the interviews. These processes included the creation and use of an interview and follow-up protocol (reviewed in detail below), bracketing, responsive interviewing (Rubin & Rubin, 2012), and researcher reflexivity during the interview (Creswell, 2014; Moustakas, 1994). According to Brinkman and Kvale (2015),

Because there are few pre-structured or standardized procedures for conducting these forms of interviews, many of the methodical decisions have to be made on the spot, during the interview. This requires a high level of skill on behalf of the interviewer, who needs to be knowledgeable about the interview topic and familiar with the
methodological options available, as well as have an understanding of the conceptual
issues of producing knowledge through conversation. (p. 19)

Specific phenomenological researcher preparations include bracketing, which we did
through the epoche process. Epoche required us to encapsulate our assumptions by first
accepting the natural attitude of participants, second engaging in reflexive critical dialogue with
ourselves and third to consciously engage active listening (Bevan, 2014; Moustakas, 2014).
According to Englander (2012), “during the interview the researcher will have to shift between
being present to the phenomenon under investigation and being present to the subject-subject
relation” in addition to employing ethical considerations and critical self-reflection (p. 25). When
a participant expressed shyness and discomfort after explicitly describing her spiritual
connection to nature, the researcher response included shifting from active, bracketed listening to
acknowledging and responding to the participant’s feelings, and critically reflecting on her
response and how her own spiritual relationship with nature may have influenced her
response. Researchers must be aware of using non-directional language and allow the participant
to lead the conversation rather than taint data by linguistically biasing interview questions
(Creswell, 2014).

Strengths of researcher as instrument included our ability to navigate the interview
interaction by balancing the scope and focus of the process. Instruments meshed when the
interview schedule and researcher as instrument worked together during the interview process to
honor the free flow of participant experience and expression while gently maintaining boundaries
and guiding them back to the interview schedule questions (Rubin & Rubin, 2012). We
maintained the integrity of the interview schedule through researcher as instrument by training
ourselves to use disciplined inquiry, which allowed us to guide rather than lead participants
through the interview schedule (Moustakas, 1994). We did this by asking open-ended follow-up questions related to participant responses as well as the phenomenon we studied. This enabled us to stay with the phenomenon while allowing the participants to answer in the way they wanted. Limitations included skewed participant responses due to the researcher’s presence and researcher bias, which can taint the interview. Individually, we pilot tested researcher as instrument by interviewing an adolescent woman independent from the sample. These preliminary conversations helped us refine our interview skills, including practicing epoche, navigating the interview relationship while maintaining the thematic focus of the interview, and practicing unbiased language in follow-up questions. The pilot supports the validity of researcher as instrument and the interview protocol supports reliability across researchers as instruments.

Our personal and professional backgrounds also show researcher as instrument reliability. Shyla practices active listening and therapeutic interview skills during client intake meetings. These professional skills require a similar epoche process outlined in phenomenology. She practices Buddhist non-attachment meditation, also supporting epoche. Additionally, her academic background, rooted in critical and constructivist paradigms, requires reflexive, critical, and self-reflective thinking. These skills influenced Shyla’s personal instrumentation level reliability.

Erin also has several experiences that support personal instrumentation reliability. Through an undergraduate academic experience, she has completed qualitative interviews with community members. In a professional setting, Erin has interviewed potential employees. She has also worked one-on-one with adolescents both in group and individual sessions. These various experiences required flexibility and responsiveness depending on the context and setting
in which the interaction took place. Additionally, these experiences required active/attentive listening, reflexivity, bracketing, reflection, and effective clarification/questioning skills.

**Data Collection Procedures**

This section focuses on the two phases of data collection. We then discuss the specific procedures we used during the interview and follow-up meeting.

**Interview.** The first phase of data collection began with the interview. We used an interview protocol (Appendix I) to standardize the data collection process between the two researchers (Creswell, 2014). This included a predetermined plan for each stage of data collection (i.e., pre, during, and post-interview). We completed an interview protocol worksheet for each participant. This form included participant pseudonym and researcher identification, a pre- and post-interview checklist, interview questions, and space to record field notes. Each interview lasted 15-30 minutes, despite the 30-60 minute time-frame we had anticipated using.

Kvale (1996) considers the interview as a stage set by a series of deliberate steps encouraging participants “to put words to their points of view on their lives and worlds” (p. 127). We began setting the stage by arriving at the interview site 30 minutes before each interview to navigate any last-minute adjustments with interview space and to settle in for the session. Prior to participant arrival, we prepared the necessary documentation (i.e., interview protocol, demographic questionnaire, psychological services form, incentive receipt). We audio recorded interviews on two password-protected electronic devices using an audio recording application. At this point, we checked recording devices for battery power and recording ability. We then took five minutes to breathe deeply and relax into a meditative state. This practice, along with the epoche process, prepared us to listen deeply to each participant's story. Kvale and Brinkman (2015) contend that these grounding practices allow the researcher to engage fully in the
interview so they can listen, avoid interruption or the giving of advice, or taking part in any behavior with the potential to interrupt the free expression of the participant.

The next step in the data collection process was to greet the participant, re-introduce ourselves, and direct the participant to the interview space. If not collected before the interview, we gathered the signed informed consent and assent forms. We began the session with a briefing to outline the process of the interview (Kvale, 1996). During the briefing we asked participants to state the purpose of the interview and verbally assent to their participation. We discussed privacy, confidentiality, and beneficence within this study. We reminded participants of the importance of their story, but also the importance of staying on topic and, answering as many questions as possible. At this point, we also informed them of the note-taking and audio recording procedures. As discussed in the section on protection of human subjects below, we notified participants that if they felt uncomfortable at any time or did not want to answer a question that they could let us know and we would move onto another question or, if needed, end the interview. We explained the psychological resources form (Appendix J), which they could use if they felt emotional stress from the interview. We told the participants that if they completed the majority of the questions they would receive a gift card incentive. At this point, participants could ask any further questions.

The next data collection procedure entailed stating the purpose of and presenting the demographic questionnaire. Participants then selected a pseudonym to protect their privacy and confidentiality. While participants completed the questionnaire, we prepared the interview protocol worksheet and the recording devices. Moustakas (1994) states that “The interviewer is responsible for creating a climate in which the research participant will feel comfortable and will respond honestly and comprehensively” (p.114). To create this environment we consciously
allowed the participant time to read and fill out the questionnaire. This process also helped us to make the cognitive shift into the research themes of nature, relationship, demographics, and perception.

After completion of the demographic questionnaire, we collected the form. We then turned on the recording devices and conducted the interview using the interview schedule questions. This schedule helped guide the interview; however, in keeping with an emergent design (Creswell, 2014), shifting could arise once the data collection began. Because of the primary objective to understand participants’ lived experience, we placed importance on hearing about what they found important because they are the experts of their experience. Through attentive listening, we showed “interest, understanding, and respect for what” the participant said (Kvale, 1996, p. 128) to obtain the desired descriptions of the HNR in this population. During the interview, we used the reiterative technique of sending back to clarify our understanding of what the participant said (Kvale, 1996). For example, a young woman described how she feels in nature, and during a pause in the participant’s speaking, the interviewer says, "What I heard you say is (paraphrase what was just said). Is this correct?” This process helped to clarify our understandings. It also offered the opportunity for the participant to describe what they meant in more detail or to correct our interpretation.

The interview concluded with a debriefing process, creating a transition from the interview experience. First, we used the send back technique to briefly describe the main points that we obtained from the interview (Kvale, 1996). Participants were then able to comment on this feedback. We asked participants if they had any additional thoughts or questions to bring up before completing the interview. At this point, we turned off the recording devices. Brinkman and Kvale (2015) discuss how a debriefing conversation can continue after turning off the
recording device. If the participant offered relevant information during this time, we asked if we could use the additional information. If so, we documented this information on the interview protocol.

Kvale (1996) suggests that the nature of the interview process offers space for participants to open up and share personal information, potentially producing feelings of tension and anxiety, or new insights. After the initial debriefing, we checked in with participants to see how they felt, if they experienced any psychological distress, and handed out the psychological services form. Then we explained the next steps of the research process to participants including the follow-up meeting, accessing transcripts, and data analysis. After this, we had participants sign a receipt of gift card (Appendix K) and distributed the first of potentially two $10.00 gift cards. We gave participants the opportunity to ask any final questions and let them know that we would be available via email if any additional questions came up. We concluded our time with a statement of thanks. After the participant left, we took ten minutes of quiet time to recall and reflect on the interview and take any necessary notes concerning details from the interview such as participant voice, facial and body expressions, and interpersonal interactions (Kvale, 1996). The final step in this stage of data collection included collecting any documentation and storing it in a secure file.

**Follow-up meeting.** The second phase of data collection began with the follow-up meeting procedures. Before attending this meeting, we completed a synopsis for each participant including initial themes that emerged from the interview, questions and clarifications, and potential quotes. We discuss details of this process in the data analysis section of this chapter. We arranged this meeting via community contact at the relevant organization or by email via a parent or guardian of the convenience sample participants.
During this meeting, we used a follow-up meeting protocol (Appendix L) with each participant. This plan for each stage of the meeting (i.e., pre, during, and post-interview) helped to standardize the data collection process between both researchers. This form included participant pseudonym and researcher identification, a pre-and post-follow-up meeting checklist and space to record field notes.

We arrived at the interview site 15 minutes before each interview. We first prepared necessary documentation (i.e., follow-up protocol, psychological services form, gift card receipt). Next, we checked recording devices for battery power and recording ability. We then took five minutes to breathe deeply and relax into a meditative state.

Next, we greeted the participant, re-introduced ourselves, and directed the participant to the interview space. The session began with a briefing to outline the process of the meeting (Kvale, 1996). We informed participants of the note-taking and audio recording procedures. Participants again received the notification that if they felt uncomfortable at any time or did not want to continue the meeting, they could let us know and we would move onto another question or end the meeting. We again provided psychological resources in the event of emotional stress.

During the initial interview, we established whether or not participants wanted a copy of the transcript and if so, we provided it at the follow-up meeting. Participants also learned about the expectations for receiving the final incentive (i.e., finishing a majority of the meeting). At this point, participants could ask any further questions.

From here, we turned on the recording devices. We then presented the individual participant’s distilled data to verify the accuracy of representation and to synthesize our data analysis with participants. This method of confirming representation accuracy with participants comes from the phenomenological culture of inquiry (Bentz & Shapiro, 1995; Van Manen,
We did this for two reasons: first, to honor participants as the experts of their lived experience, and second, to minimize researcher bias during data collection and analysis. Participants had the opportunity to exclude any direct quotations or inaccurate representations. If participants wanted to add more detail at this time, we gave them the opportunity to do so because this information could inform their lived experience of the HNR. We considered it an extension of the initial data collection and later included any added information into the analysis.

After we completed this process, we turned off the recording devices to provide privacy and again checked in with participants to see how they were feeling. They then had the opportunity to make any final statements or ask questions. We notified participants of next steps including data analysis, distribution of content to the community, and research night. Participants then signed the final gift card receipt, and we distributed the remaining $10.00 gift card. From here, we began closure of the project and relationship through an acknowledgment honoring the participants’ time, story sharing, and willingness to take part in the study. After participants left the meeting space, we took ten minutes to reflect and take any additional notes. Finally, we collected all documentation and secured it in a locked file.

**Data Analysis Procedures**

We employed Interpretative Phenomenological Analysis (IPA), an inductive thematic analysis grounded in phenomenological methodology (Pietkiewicz & Smith, 2014). IPA offers flexible, yet standardized guidelines for phenomenological inquiry asking researchers to engage in epoche (bracketing their own assumptions and lenses), while simultaneously acknowledging researcher interpretation since analysis cannot be separated from it. IPA “is concerned with how things appear and letting things speak for themselves, and interpretative because it recognizes there is no such thing as an uninterpreted phenomenon” (Pietkiewicz & Smith, 2014, p. 8).
Additionally, we referenced Moustakas’ (1994) steps of phenomenological data analysis; these steps of analysis include: horizontalization, reduction and elimination, clustering meanings and themes, validation of themes, constructing textual and structural descriptions for each participant, and constructing a composite description representative of the group. IPA steps include multiple reading of transcripts with note taking, transforming notes into emergent themes, seeking relationships and clustering themes, and writing a narrative account describing the results (Pietkiewicz & Smith, 2014). Below, we list the combined phenomenological steps and methods we employed in our analysis.

We concurrently and recurrently interwove data collection and analysis by transcribing interviews throughout the five weeks we conducted the interviews. Analysis began with the verbatim transcription of each interview by the researcher who hosted the interview. Transcription occurred within 1-3 days of the interview. Transcription was the first of several transcript readings. Following transcription, we shared the transcript and recorded interview with one another. We each listened to the interview while reading the transcript, making notes and compiling a one page synopsis including preliminary themes, potential quotes, and additional notes.

Next, we presented a combined version of each synopses to participants during the follow-up meeting to check for accuracy and obtain consent to use direct quotes when reporting results. We also used these synopses during analysis to cross check first level codes with the preliminary themes surfacing in the synopses, identifying, changing and/or eliminating codes containing inaccurate researcher interpretation. After the follow-up meeting, we compiled all participant documents (demographic questionnaire, interview protocol, transcription, synopsis,
follow-up protocol, and recording, if applicable) combining the transcription, synopsis, protocols, and any additional field notes into one, master document per participant for analysis.

We met for seven days over a two-week period to collectively analyze all of the master documents. Prior to each meeting, we meditated for five to ten minutes to ground ourselves into epoche. Together, we listened to each interview recording while reading the transcripts (second or third reading depending on the interview/researcher), making notes in the margin and/or underlining codes and bracketing quotes. Horizontalization occurred during this process, giving each idea equal attention by discussing its meaning and definition and then bracketing phenomenon into a word or phrase-its code (Moustakas, 1994). We distilled multiple interpretations into cohesive meaning units through reflexive inter-researcher dialogue.

Following this process, we inserted each code into an electronic inductive codebook. Potential categories also emerged and morphed through this dialectic coding process so we created a potential categories column alongside the code cells. We assigned individual tabs to each participant containing codes and potential categories, copying existing emergent codes and potential categories into each new tab. A reflexive and iterative coding process evolved as we moved back and forth across tabs to add and cross check code accuracy across participants. As new codes surfaced in later interview coding, or as we discerned detailed nuances of our categories and codes, we reflexively shaped previous codes (split them into new codes, shifted codes from potential category to a new potential category, etc.) from early interviews. By the fifth interview, we started noting emerging themes (analytic memos) at the bottom of each participant tab. We concluded our first cycle of coding (listened to interviews/read transcripts, horizontalized, and coded) once we added all ten interviews to the electronic inductive codebook.
During the transition stage between cycle one (coding) and cycle two (pattern categorizing) of analysis, we cleaned up the data in each tab in our inductive codebook. We created a tab to house analytic memos, theme threads and patterns noted in participant tabs. Then, we organized and restructured data through verbatim transference to a collective “potential categories” tab to view the data in a different way. We organized potential categories in rows and the participant pseudonyms in columns. We highlighted any confusing or non-verbatim code transference for inter-reader discussion. Next, we combined, reduced, and/or eliminated overlapping, repetitive, and vague codes, collapsing them into potential categories across participants. This process showed the strength and frequency of each potential category across all participants, allowing us to collapse potential categories into final pattern categories. Organizing the potential categories into the final pattern categories assisted with cross participant analysis and set up the third phase of analysis. We consulted the transcripts a fourth time to cross check this level of the process for accuracy.

The third phase of analysis, theme generation, began with clumping pattern categories into three potential themes: Authenticity, Connection, and Disruption. To validate these themes and create textural and structural descriptions, we mind-mapped the pattern categories and codes on a dry erase board. Through this process of analysis, we created the final three themes: Authenticity of Nature; Connection to Nature, Self, and Others; and Disruption of the Human-Nature Relationship. We each wrote a composite description of a theme and collaborated on writing the composite description of the third. We report the three themes in the results chapter.

Protection of Human Subjects

The St. Catherine University Institutional Review Board (IRB) approved this study at the expedited review level. Because minors fall under the definition of a vulnerable population and
the participants were 13-18, the study required this level of review. Special considerations were necessary when working with this population including gathering signed child assent and parental informed consent forms. Informed consent includes “informing the research subjects about the overall purpose of the investigation and the main features of the design, as well as of any possible risks and benefits from participation in the research project” (Kvale, 1996, p.112). These forms ensure voluntary participation and removal from the study.

Specific risks involved with this study included breach of participant privacy and confidentiality, coercion, and emotional distress. Privacy emphasizes anonymity; participants’ have a choice in the information and extent to which they choose to share (Creswell, 2014). Confidentiality refers to the protection of private data obtained from participants’ (Kvale, 1996). To minimize privacy invasion or a confidentiality breach we took several steps to protect participants. To address privacy concerns, we disclosed to participants that if at any time they were uncomfortable or did not want to answer a question, they could notify us and we would move onto another question or end the interview if needed. We used participant-chosen pseudonyms during the entire interview process. We kept any identifying information about participants in a locked safe, separate from transcripts and data analysis. Interview transcripts and data were de-identified and stored in two password-protected computers. The number of people who had access to this data was limited to the researchers and the research advisers. Following data analysis, we combined participant responses to minimize individual exposure. Although we used some direct quotes in our results chapter, we removed or changed identifiable data to protect participants’ confidentiality. In addition to this, we gave participants the opportunity during the follow-up meeting, to redact any quotes or representation that they felt might have identified them. We destroyed identifiable data by May 17, 2017.
To address the ethical consideration of coercion, we notified participants that participation in the study is voluntary. If they decided to take part in the study and signed the consent form, but later changed their mind, they could notify us and we would exclude them from the study. We also informed participants that once their answers were part of the analysis, we would no longer be able to remove them from the study. Participants’ willingness to participate or not had no negative or positive effects on their relationship with St. Catherine University or with any of the students or faculty involved in the research.

Another risk associated with this study was the potential for emotional distress. Kvale (1996) deems the interview method a moralistic endeavor since the reciprocal interaction involved in this process affects both interviewer and interviewee. The knowledge we obtained influences how we understand the phenomena. During the interview process, although challenging to anticipate, sensitive information could have surfaced (Creswell, 2014). An awareness of this possibility was important to acknowledge throughout the interview process. After the interview had concluded, we checked in with participants to gauge their emotional state. We reiterated that if an emotional shift occurred, participants could contact us for support and assistance. We also provided a list of local and financially accessible psychological support services if the interview or any part of this research process triggered psychological discomfort in the participants.

To provide reciprocity for involvement in the study (Creswell, 2014), participants received incentives. Participants had the opportunity to receive two $10.00 gift cards. Upon completion of the interview, all participants received one $10.00 gift card. Within the Phenomenological culture of inquiry grounding this study, participants did not need to answer each question for the interview to be complete. However, they needed to answer most of the
questions. Upon completion of the follow-up meeting, all participants received a second $10.00 gift card. The follow-up meeting concluded once the participant reviewed our representation of the data and offered any feedback.

**Demonstrating Rigor**

At every step of design and execution, researchers should weave reliability and validity into the fabric of a qualitative research project (Brinkman & Kvale, 2015; Cresswell, 2014; Moustakas, 1994). Reliability and validity exist on two levels: instrumentation and process. Below, we discuss the process level steps we used to ensure a consistent, systematic, and disciplined qualitative inquiry.

**Process validity and reliability.** Throughout research design, data collection, and analysis, we maintained a consistent and ongoing record of design elements, instrumentation, and self-preparation through epoche, reflexivity, responsiveness, and active analytical stance. We created a journal to record challenges, changes, and researcher processes throughout data collection and analysis (active analytical stance). Validity strategies included analyzing limitations of the sample as representative of a population, continuous dialogue addressing bidirectional researcher effects on data collection and analysis, triangulating across participant responses, data horizontalization and outlier checking, replicating findings, and generation of alternative explanations (Miles, Huberman, & Saldana, 2014). Additional validity strategies included the use of specific, rich, and descriptive language throughout analysis, clarification of researcher biases, and inclusion of discrepant information when reporting results (Creswell, 2014).

To ensure data collection reliability, we designed and used an interview protocol. The interview protocol was a systematic container for conducting interviews (Creswell, 2014),
bridging the interview schedule and researcher as instrument so each of us was, within the
constructivist paradigm of phenomenology, maintaining a basic approach to the interview
process. We continuously communicated about what we saw, found, and heard, providing
feedback about instrumentation and process, and collectively discussing obstacles and solutions.
One step of the interview protocol called for us to meditate for five to ten minutes prior to each
interview to ground ourselves into the epoche process, which continued to occur responsively
and reflexively throughout the interview.

To support data analysis reliability, we created initial synopses, which we presented to
participants (except for the participant who was not available for a follow-up meeting) for
accuracy. We compared preliminary themes surfacing in the synopses with first level codes and
potential categories, identifying, changing and/or eliminating codes containing inaccurate
researcher interpretation. Additionally, we cross-checked analysis at several stages (e.g.,
maintaining code definition integrity) with participant transcripts for reliability. We had rich
discussions concerning analysis processes (coding, categorizing, thematizing) and potential
themes. These discussions resulted in an exploration of alternative thematic conclusions. We
came to a final collective theme consensus, which strengthens reliability. We recorded these
processes in our researcher journal, including decisions to eliminate outliers from results
reporting.

**Design Specific Limitations**

All research designs have both strengths and limitations. In this section, we explore the
specific limitations of this study design.

One limitation of this study stems from researcher bias. We, as researchers, function
within a different context than our participants do as adolescents. Although we have taken steps
to mitigate this bias, such as conducting pilot interviews with adolescents, seeking out feedback from the population to edit our interview schedule, and including follow-up meetings as a way to synthesize our analysis of data with the participant, we still created the research within the context of our experience.

Although we never intended to generalize our data to the larger adolescent population, from a positivist or post-positivist perspective, our qualitative design and small sample places limits on this study. The limited age range of our population (one 13, 15, 16, and 18-year-old, and six 17 year olds) and location of residency (two Minneapolis residents, eight St. Paul area residents) affects the diversity of our sample. Additionally, we recruited eight out of ten participants from the same community program. This proved beneficial regarding setting interview times and location as we worked with the community program schedule and conducted all interviews at their location. However, a limitation emerged from participant bias. We discovered in the first week of interviewing that the community program that many of the participants attend hosts wilderness nature excursions. These shared experiences could support the HNR of this sample, which may not be representative of the general population. In the future, we will be more intentional and explicit with our inclusion and exclusion criteria to eliminate this potential bias. A clearer inclusion and exclusion criteria will also indicate length of time a participant has lived in an urban environment, and if they currently live in an urban rather than suburban environment.
Results

The purpose of this chapter is to describe the results of our study, which asks “What is the lived experience of urban adolescent women’s Human-Nature Relationship?” We begin with a description of participants and relevant demographic data. Next, we present observational data. Finally, we discuss three themes that emerged from the data along with supportive documentation: Authenticity of Nature; Connection to Nature, Self, and Others; and Disruption of the Human-Nature Relationship (HNR).

Description of the Participants

We report the results of interviews co-created with ten urban adolescent female-identified people. Ages range from 13 to 18 including one 13, 15, 16, and 18-year-old, as well as six 17 year olds. One participant, identifying as female within a fluid construct of gender, uses the pronouns they/them. Eight participants live in a large urban area (either Minneapolis or St. Paul, Minnesota), and two live in first ring suburbs of these urban areas (Maplewood and Roseville, Minnesota). One participant is an exchange student who, at the time of the interview, had six months of experience living in a U.S. urban environment. The racial and ethnic identities of the participants include: Karen, Hmong, Indian, Pakistani, Bi-racial (Black & White), and Caucasian. Six participants live in low-income families, based on their answer to the question “does your family qualify for free or reduced school lunch” on the Demographic Questionnaire. One participant chose not to answer this question, and three do not qualify for free or reduced school lunch.

We recruited eight participants through a community after school program focused on youth leadership and cultural exploration. All eight participants recruited through this organization take part in wilderness retreats as a component of programming. We also recruited
two participants from the general community. All 10 participants indicate that they spend time in nature. Nine report attending wilderness retreats. Six state that their family members spend time in nature. Three say that their family members do not spend time in nature, and one participant indicates that her family members occasionally spend time in nature.

**Observational Data**

In this section, we describe observational data that contributes to our results. Each interview began and ended with approximately five minutes of dialogue with participants to initiate and conclude the interview. This occurred before and after we initiated audio recording procedures. Initial interviews ranged from 15 minutes and 38 seconds to 26 minutes and 57 seconds. Follow-up interviews ranged from 4 minutes and 28 seconds to 14 minutes and 27 seconds. A majority of interviews took place at the partnering community organization, in a private room. One interview took place in the participant's home, and another occurred in a public library conference room. The follow-up for this same participant took place in a coffee shop. This location had distractions, such as noise, which made communication more difficult both during the meeting and while listening to the audio recording afterward.

Most participants expressed gratitude and excitement for having the opportunity to participate in the interviews and share their experience of the HNR. One participant noted how talking about nature in the interview created a point to reconnect with her relationship to nature. Another participant was animated and excited when talking about wilderness nature. Her voice volume and cadence dropped dramatically anytime she talked about urban, or as she called it, *forced nature*. A third participant, who exclusively discussed mental health in relation to her HNR, reported her state of depression prior to the follow-up meeting. When the researcher asked if the interview exacerbated her depression, the participant said no, and explained that talking
about nature helps to relieve her feelings of depression. At least three participants were observably ready to finish the interview; either by vocalizing this to us or shifting their attention to what was happening outside the interview space. One participant openly shared her knowledge, experience, and passion surrounding food systems and food justice when researchers asked if there was anything else that she wanted to talk about.

**Themes**

Three themes emerge through Interpretive Phenomenological Analysis (IPA). The first is Authenticity of Nature, followed by Connection to Nature, Self, and Others, and ending with Disruption of the Human-Nature Relationship. In this section, we describe each theme individually, including relevant subthemes and supportive quotes.

**Authenticity of nature.** This theme describes the participants’ collective lived experience of nature as *origin*. Authenticity means genuine and of undisputed origin. According to the participants, nature’s authenticity contrasts the human-made elements of urban living and is independent of, and mutually exclusive to, the built environment. Each participant presents the authenticity of nature uniquely including descriptors such as *beautiful, clean, healthy, pure, organic, real, untouched, vibrant, nature is all natural, and it’s always been here*. The theme title emerged through one participant’s description of what she meant when stating that nature is authentic:

- *nature is organic, I guess. And um, it’s not made by man. It’s kind of like, over the years, um, the environment has shaped [itself] to be that way...for example bodies of water just form*

Several participants address the authenticity and longevity of nature:
[Nature]...doesn’t have to be man-made, or it doesn’t have to be already structured, it’s just, it’s been there for so many years, you know.

and

What is nature? It’s just a whole ‘nother thing! It’s pretty, it’s been there longer, hopefully it hasn’t experienced any chemical stuff.

One participant explains the process of human manipulation that shifts raw nature to human-made:

everything’s like, made from like stuff that like came from the earth...but then...once it’s like created it’s something else, it’s then like, it’s like it’s a different thing...it’s all made from nature, but not necessarily like, still nature.

Participants contrast intrinsic natural processes, such as diurnal and seasonal cycles, the variable and changing landscape of nature, and the flow of life with human manipulation of nature. One participant, when asked to expound on what she meant when exclaiming that nature is Life!, the Circle of Life!, Mother Nature!, Mother Earth!, describes innate processes of nature from atomic to gross materialization, the food chain, and death. She states,

And it’s not just our body that decomposes with the nature, it’s also like...our soul goes back and returns back to the earth...’cause that’s where we originated from.

Some participants also mention that we come from nature while others call it our home.

Each participant includes elements of nature (e.g., trees, birds, water) in their descriptions of nature. Several participants go on to contrast these elements with what nature is not. An example of this contrast is:

Nature, well like Mother Nature is kind of like trees, flowers, spring?

Autumn...oceans...It’s kind of like wilderness, wilderness...it’s not like civilizations...it’s
kind of like out somewhere like far away...[F]ar away from the city...feels more [like] nature.

Other participants express the idea of ‘nature as separate from city’ with statements such as:

[Nature is] really secluded from anything that has to do with the city.

and

If you want to be out, out of like the nature...you’re not in the city.

Participants experience the conceptual and literal space of nature as the middle of nowhere, separate, secluded, far away, open space, and non-confining, with no restrictions, no boundaries, and freeing while simultaneously encompassing. In these spaces, participants can connect with nature, themselves, and others.

Connection to nature, self, and others. Connection describes the participants’ collective lived experience of relating to and connecting with nature. Nature exposure assists participants in connecting with themselves, the natural world, and other people. Participants experience this connection through personal attunement, nature as teacher, and learning about nature from others (e.g., family members, teachers). In this section, we present three sub-themes to describe this connection: attunement to self, nature as teacher, and teachers of nature.

Many participants explicitly describe their connection to nature and all participants imply this connection. One participant asserts:

I've always felt connected, been connected to nature because of my name...my name is nature.

Another participant articulates her connection with nature when she says:

when I’m like with nature, it’s kind of like, me and nature, it's like we're having a conversation
A third participant describes her connection to nature which inspires a larger sense of connection to the world. She states,

*nature is a big part of me...I just feel like I can connect more with other things and like nature when I'm in nature...I actually feel connected you know, like, belonging and connected to this world because this [nature] is the surrounding around me.*

Participant connection with nature helps them connect with themselves.

*Attunement to self.* All participants report that nature immersion provides space and time for personal attunement; the opportunity to come back to and be in harmony with themselves. One participant illustrates this experience with nature when she explains:

*I feel like it’s just a place where I can relax, a place where I can just think, I belong to.*

Participants use words such as *serenity, solitude, calm, stillness, grounding, quiet, peaceful, and relaxed,* to describe qualities of nature that support this process.

For many participants, nature offers space for engaging with their present surroundings by focusing on nature elements that interest them in the moment such as sitting near a stream, while listening to and looking at the water. One participant finds enjoyment visiting wooded areas: *You can find like sticks on the ground and that’s fun, to like find things.* While another participant presents nature elements that captured her attention:

*one plant looks like a blueberry but it’s poison[ess]...it’s really cool to see! and...there’s like one tiny tree...it grew up in like another tree, so it’s really cool too, and there [are] many flowers there, I [have] never see[n]...I don’t know what the name of that flower [is] but it’s white, like the whole flower is white! Like even the body and...the leaves, everything is white! So it was really cool to see those kinds of things.*
Many of the participants find that spending time in nature provides an opportunity to tune into their present experience and let go of the stressors and demands of everyday life. For example, one participant discusses her experience of being in rural nature:

*my mind is clear, like it’s a lot less, you know, I’m not thinking about like ten things at a time, it’s [not] like what do I have to do tomorrow, and things like that, it’s like what am I doing right now, you know, it feels better.*

Another participant describes the relaxation that comes from this experience:

*in nature…I can relax…[and have] no worries…you can be like out of your mind, like in another world, like somewhere else instead of this place, like where we live.*

A third participant explains how time in nature helps her release school stress:

*In school you know, you have time when you’re stressed and frustrated…in…nature, like trees and stuff…you look at those green, feel fresh, and you have like full peaceful mind instead of frustrated mind.*

Many participants also discuss the importance of reflection in their lives. The time *alone* and *space* found in nature supports this process. For example, one participant states:

*I’m really a reflective person and so the outdoors…gives me space…and like freedom, to reflect and be by myself and just enjoy the beauty of it.*

Another participant divulges a similar experience:

*when it feels like life is heavy, I just go to the backyard, or…to a park…alone, and I just reflect through life… It just give[s] you like space like to be with yourself and be present with yourself.*

Participants use words such as *refreshing, regrounding* and *rejuvenating* to explain their experience of spending time in nature. For some, nature is a space for respite bestowing an
opportunity for revitalization that offers energy for everyday life. One participant talks about nature as:

A place where I feel like I can just sort out things that I needed to sort out, and then get back up, and get ready to fight back through with life.

Another participant reveals:

I was a lot less stressed and I just kind of felt better overall, like healthier, and like kind of happier.

For one participant nature is a space where she can be a more open person, while others associate appreciation with spending time in nature which increases appreciation for nature and life itself. Another participant expresses her spiritual and empathetic connection with nature:

I feel like nature, I’ve connected with it like spiritually as well...if there’s a forest, that’s like, I guess you can say like, dying, or whatever, when you walk into it you kind of feel like really sad, just there’s just a wave of sorrow that kind of like hits you, well hits me I guess.

Many participants repeated I don’t know throughout the interviews when attempting to describe strong experiences, feelings, or qualities of their connection to nature.

Nature as teacher. Participants also describe their connection to nature as learning life lessons in and through nature. They communicate the idea of nature as teacher when they say:

We went...hiking [in a state park] and...our goal is...to like listen to the surrounding around us. What do we hear? What do we see? And pick up something, one thing, or an object out there, that represents us, represents our self, it represents our group, it represents our life...I actually took a picture of a, like a path that we...walked on...The path, just...it doesn’t represent me only, but...it represents everyone, you know. Because
there will always be times where you have to make decisions... so I chose the path because that’s how we are living

Another participant describes metaphorical learning from natural processes. She asserts,

in your life you have... problems, right, they could be big, they could be small... like nature they have... storms, like thunderstorms... which is normal for nature... they need the rains... they... need those days to be... beautiful and growing... I feel like nature is there like to tell us that everything is... ok

Participants report that people who teach them about nature provide context for these lessons.

**Teachers of nature.** In addition to experiencing nature as a teacher, a participant expresses the importance of having other people teach youth about nature when she declares:

having a good teacher... plays a good, a big role with finding out about nature.

Teachers include family members such as mom, aunt, grandparents, sister, friends and peers, school teachers, wilderness instructors, and volunteers with community programs. The participants list several avenues through which they learn about nature including school lessons and research projects as well as more immersive experiences such as gardening, farming, wild harvesting, camping, field trips, and Boundary Waters retreats (BWr) or other wilderness excursions. When describing a BWr, one participant exclaims,

I LOVE THEM [BWr] SO MUCH! It’s so fun 'cause not only do you get to learn about nature and just things that you never knew about nature, you also get to learn a lot about your peers around you and how they connect with nature as well and it’s just really cool to know about those similarities and difference we have between each other.

For participants, immersion in nature nurtures the HNR:
I never have...the feelings of peacefulness before going to the Boundary Waters [BW] and then I never thought of going to park, but then after coming back [from] BW...I always like thought I want to go to park...before [BW]...I never thought of even going outside, you know, but now it’s like I just love the feelings of like, the [natural] world.

Participants believe that other people should spend time in nature too:

I feel like everyone should take their time in nature...it’s just like with nature we can be better human[s]

For participants, connection to nature, self, and others occurs through learning about and immersion in nature. However, their experience of urban nature is layered and complex.

**Disruption of the Human-Nature Relationship.** All participants discuss disruptions to connecting with nature in the urban environment. Although they all experience a connection to nature, and some use urban nature, their connection to nature exists separately from the urban environment. Three intersecting sub-themes emerge that indicate a disruption of the HNR: modern living, the built urban environment, and social factors.

**Modern living.** Industrialization and technology, components of modern living, result in varying forms of disruption for many participants. A few participants talk about being in nature without access to technology. One participant discusses the role of modern health systems replacing nature as healer:

[In] the 21st century, everything is technology...we don’t need to go to...[nature] for our breathing or health...we just go...to [the] doctor. Doctors are very good, but they can’t do natural things.

Another participant expresses the role of modern food systems:
we’re not really eating natural food because, you know, all the food that we buy...they’re processed foods. I know there’s organic stores, but then, my mom told me...we can’t really eat that because it’s really expensive.

A third participant emphasizes the effects of materialism:

it’s such a more industrialized time...we’re a lot more focused on...less about the earth, and less about nature...[and] more concerned about material items and human things.

Many participants discuss time as a barrier to connecting with nature. For some participants, the busy pace of modern living does not align with the normal, slow, go with the flow pace of nature. Lack of time, due to daily responsibilities such as school, jobs, and extracurricular activities, limits some participants’ ability to access nature spaces. For example, one participant explains: even though I really really love nature, I don’t really have time to go to [the] park.

Another participant emphasizes her connection to wild nature, however, only visits these spaces once or twice a year. Although participants connect with nature, getting to nature spaces takes planning and time, which limits participant access to these spaces. One participant asserts: there are places, but they’re not, like, the easiest places to get to. A second participant describes a similar experience:

I feel like nature is not...that...available because...I live in St. Paul, so it’s kind of a...bit far away to go to like a park...so I just go to my backyard.

Distance to both parks and wild nature affects participants’ ability to spend time in these spaces, which is partially due to the built urban environment.
**Built urban environment.** Modern living creates the built urban environment, which is another factor that disrupts our participants’ HNR. Components of this include *roads, cars, buildings, concrete,* and *people.* One participant recounts how buildings in the urban environment *affect the natural way of life.* A second participant contrasts her experience of city nature with wild nature:

> [it is] *not the same as me sitting outside in the BW...with just myself, you know, no cars going by, no buildings towering over me, none of that city stuff.*

Another participant depicts a similar experience:

*It’s distracting...the cars, always like...kind of busy...it’s not...just like green everywhere, it’s like if you go...you’re still with yourself, but you’re also distracted, like you’re not fully with yourself.*

Eight participants report how pollution (including *air, water, light,* and *noise* pollution) in the urban environment is disruptive to their HNR. One participant voices:

*In the city, there might be some nature available, like a park...but most of the time in the big city, there’s cars...gas...restaurants...those smells, they make me feel I’m suffocated, I feel like I’m not breathing well...in nature...you...get to breath fresh air...you don’t have to breathe all the stinky air.*

A second participant expresses feeling unsafe in these spaces and presents public parks as:

*not...clean...there’s a lot of trash everywhere and graffiti...the benches are bad and I feel like that’s not a place that I would want to go.*

Many participants experience nature as quiet; however, noises within a city environment distract from this experience. One participant recounts this when she states:
I just want...the nature sound[s] not...the city sound...I just wanted to hear the wind, and the birds...not like the city with the cars and all those sounds.

Participants also describe urban nature as limited, controlled, and forced. One participant says:

There’s nature, I guess...trees, spotted around here...bushes or flowers, that’s nature too, but...I guess I would describe it as forced nature...there must have been trees and forest here before, but then they all got torn down to replace it for the buildings.

Another participant explains:

I feel like with urban nature, it’s very man-made...it’s kind of like...build over...what was there. And then they’ll be like, oh no, we have to add in something to make it more...friendly...like...add some...trees or something, and it’s just like very kind of forced nature.

Some participants experience a lack of nature diversity within an urban setting. One participant connects with nature through animals, but comments on the limited diversity of wildlife in cities. Another participant contrasts the plant and insect diversity found within wild nature to that of parks in an urban setting:

I don’t feel like it’s really nature [be]cause when you go, you just see...a place with grass...and there’s not much...nature feelings.

Although many participants talk about their neighborhoods and parks as spaces where they can be outdoors, their nature experiences vary. One participant feels frightened by neighborhood dogs. Another participant is apathetic toward urban nature while a third participant claims that having parks is better than not having any nature spaces. In contrast, one participant reveals a connection to the Como Japanese Garden, which provides a calm, quiet space for them. Another participant notes that the city of Minneapolis contains many parks and
she spends time in these spaces; however, this type of nature does not provide her the same benefits as rural nature. She states:

*nature in the city is not as peaceful as rural nature...it’s still surrounded by...people and noise and it’s not as organic. I don’t know if I really get anything out of it, like a place to hang out I guess.*

Several participants prefer park spaces with *more wooded areas, flowers, and less pollution* that would better support their HNR.

In addition to the disruptive physical components of the built urban environment, participants also consider *people* in the built urban environment to limit their ability to connect with nature. One participant explains how *crowded* parks distract her from having space to reflect. Additional social factors disrupt the participant’s HNR.

**Social factors.** Participants experience a variety of social factors as disruptive to their HNR including community, family, and the current social atmosphere. Several participants discuss community-level social factors as disruptive to their HNR. They experience a lack of community involvement in caring for public parks and perceive that community members undervalue nature and *don’t respect the space[s]*. One participant reports:

*I just wish that people in the city [would] take care of...the parks, [be]cause...the park by my house...it’s like really dirty to be honest. It’s like, the water is very polluted and there is like trash everywhere even though they have...a trash can.*

One participant emphasizes the importance of community members who actively engage in urban nature space *maintenance* rather than needing *more park resources.*
Other participants discuss the impact of family-level social factors. This includes being *too busy* to access nature or family *technology* use taking the place of spending time together in nature.

Another participant talks about the current social climate affecting feelings of safety in nature spaces: *people need a place that’s safe for them* [in nature], *rather than...a place where peoples going to stare at you, peoples going to look at you, peoples going to judge you.* These varying social factors influence participants’ ability to connect with urban nature.

The urban adolescent female-identified individuals we interviewed for this study experience nature as authentic and separate from the built urban environment. Immersion in natural space offers them the ability to *relax* and *be present*, attuning with themselves and nature. Connection with nature, self, and others occurs through learning about and immersion in nature. Although elements of nature and other natural resources, such as parks and lakes, exist in the built urban environment, most participants do not experience a connection with nature in the city and view this environment as disruptive to the HNR.
Discussion

The purpose of this chapter is to interpret our research findings. We begin by exploring findings consistent with the literature. Next, we discuss unexpected findings. Then, we offer implications from this project for the field of holistic health, community education and policy, and further research. This chapter ends with our conclusion.

Findings Consistent with the Literature

As the Biophilia Hypothesis (Kellert, 1995; Wilson, 1984) suggests, our participants echoed an innate connection to and love of nature with statements like: *I’ve always felt connected to nature*. Our participants may feel this connection because of the nature immersion they experience through wilderness programming that takes them out of the city (Barton et al., 2016; Ray, 2007; Whittington, 2005). Eight of the 10 participants experience nature immersion as part of an after-school program; therefore, we think the similarity in findings is due to the innate human-nature connection (Wilson, 1984; Kellert, 1995), wilderness programing (Barton et al., 2016; Ray, 2007; Whittington, 2005), and Environmental Literacy resulting from nature experiences in this program (Hollweg et al., 2011; Stevenson et al., 2013).

Consistent with Kaplan and Kaplan (1989) and Kaplan’s (1995) Attention Restoration Theory (ART), which proposes that spending time in nature revitalizes mental faculties, our participants describe experiencing restoration while in nature when they say: *in nature...I can relax...[and] be...out of...[my] mind*. Participants reveal their experience of soft fascination and being away (Kaplan & Kaplan, 1989; Kaplan, 1995), two components of ART, through statements like: *You can find like sticks on the ground and that’s fun, to like find things* (soft fascination) and *it’s [not] like what do I have to do tomorrow...it’s like what am I doing right now* (being away). We think the parallel between ART and our findings occurs because of
nature’s ability to engage participants’ senses, allowing them to be present and let go of direct attentional demands and stressors (Kaplan & Kaplan, 1989; Kaplan, 1995; Lloyd et al., 2008; Wiens et al., 2016). Nature-based mental restoration and stress reduction occur when a safe and non-threatening perception of the nature is present (Kaplan & Kaplan, 1989; Kaplan, 1995; Ulrich, 1983), which our participants do not experience in urban nature.

Our findings show that urban adolescent women (UAW) experience physical, social, perceptual, and preferential barriers which prevent them from accessing and using urban nature. Other researchers indicate distance, personal safety, nature space quality, and preference for natural urban nature spaces as similar urban nature use and access barriers for other urban youth (Gearin & Kahle, 2006; Lloyd et al., 2008; Mahdair & Dali, 2016; Ries et al., 2009). Corresponding with research acknowledging physical barriers to urban nature access and use from youth’s perspectives (Mahdair & Dali, 2016; Ries et al., 2009), our participants list analogous urban nature barriers including distance, traffic, and urban nature space availability. Akin to Gearin & Kahle’s (2006) findings, our participants report a lack of community engagement in park maintenance (a lot of trash everywhere and graffiti) and personal safety as social barriers to urban nature use. Perceptual urban nature access and use barriers include perceived quality of urban nature spaces (Ries et al., 2009) and affective forecasting errors (Nisbet & Zelenski, 2011) indicated in participant responses to questions about urban nature such as: I feel like that’s not a place that I would want to go. Comparable to participants’ preference for natural urban nature in Lloyd et al. (2008) and Gearin and Kahle (2006), our participants prefer urban nature spaces with natural elements rather than structured recreation based parks. All of our participants report barriers to urban nature use and access; therefore, we think the similarity in findings is due to physical and social barriers (Gearin & Kahle, 2006; Mahdair &
Dali, 2016; Ries et al., 2009), participant preference for nature-based urban nature space design (Gearin & Kahle, 2006; Lloyd et al., 2008), and affective forecasting errors (Nisbet & Zelenski, 2011). Limited opportunities to connect with urban nature, especially natural urban nature spaces which they prefer (Gearin & Kahle, 2006; Lloyd et al., 2008) reinforce urban nature oriented affective forecasting errors (Nisbet & Zelenski, 2011).

**Unexpected Findings**

Our study contains several unexpected findings. The literature states that there is a growing disconnection between youth and nature (Louv, 2008); however, our participants express a strong connection to nature. We speculate this level of nature connection is due to the nature and wilderness programming most of the participants (8 of 10) receive through community programming. We did not expect this finding as we intended for a population sample that did not have previous wilderness programing. Below, we discuss implications for inclusion and exclusion criteria for future research related to this topic.

Based on the literature related to adolescents and nature (Gearin & Kahle, 2006; Li & Ernst, 2015; Lloyd et al., 2008; Mahdiar & Dali, 2016; Wiens et al., 2016), we did not anticipate the emergence of our first theme, Authenticity of Nature, or nature as origin, which participants describe as: *nature is all natural, it’s always been here, and it’s not made by man*. One possible explanation for this finding is the phenomenological culture of inquiry grounding this research. Phenomenology drives the open-ended nature-based questions we asked the participants. The openness of the questions allowed this theme to surface. Other possible reasons include the scope of our research, which encompasses wilderness nature instead of exclusively examining urban and suburban park and green space use (Gearin & Kahle, 2006; Li & Ernst, 2015; Lloyd et al., 2008; Mahdiar & Dali, 2016). We think this is important because learning about the broad
relationship between humans and nature for particular populations, such as UAW foundationally informs design, access, use, and perceptions of urban nature spaces.

Another unexpected finding is the importance of a nature teachers, which our participants express both explicitly and implicitly. The participants value adults who support their connection to nature. One participant declares: having a good teacher...plays...a big role with finding out about nature. We did not see similar or any related findings to this idea in the literature. We speculate that the openness of our methodology allowed this idea to surface organically. Another explanation is that the participants have experiences with teachers of nature, and the ability to articulate this relationship, which they feel is an important element of their Human-Nature Relationship (HNR). This finding is significant because it indicates the potential for nature activities and programing to strengthen generational and community relationships as well as nature relationships.

The fourth unexpected finding of this research is the expression of spirituality manifesting from the HNR of UAW. Components of spirituality or spiritual experiences emerge in the data yet we did not directly ask about this. One participant explicitly asserts a spiritual connection to nature when she said: I’ve connected with it [nature] like spiritually as well. Other participants allude to a potential spiritual experience of nature. Many participants repeated I don’t know throughout their interviews when attempting to describe qualities of or emotions related to nature that are difficult to articulate. The limited literature addressing spiritual components of the HNR is specific to an adult population (Hedlund-de Wit, 2013; Heintzman, 2010; Schauer, Koch, Lemieux, & Willey, 2016). We found no literature discussing spiritual aspects of the UAW’s HNR. This thread of not knowing or difficulty describing these experiences may indicate spiritual experiences in, through, and with nature. However, difficulty
in describing spiritual experiences or limited awareness of developing spirituality may account for the limited language surrounding these experiences. We discuss implications of these unexpected findings below, outlining applications of this research for the field of holistic health studies, community programming and education, and future research.

**Implications**

Based on the three themes found in this study: Authenticity of Nature; Connection to Nature, Self, and Others; and Disruption of the Human-Nature Relationship, we discuss the significance of this research beyond these findings. By increasing awareness of the HNR and redefining UAW’s relationship with urban nature, we consider implications for holistic health, the community, and future research.

**Holistic health.** This research is significant within the holistic health field as the HNR supports the varied dimensions of health including physical, mental/emotional, spiritual, social, and environmental (Guéguen & Stefan, 2016; Hedlund-de Wit, 2013; Heintzman, 2010; Herrington & Brussoni, 2015; Hollweg et al., 2011; Kaplan & Kaplan, 1989; Kaplan, 1995; Matsuoka & Sullivan, 2011; Stevenson et al., 2013; Weinstein et al., 2015; Weinstein, Przybylski, & Ryan, 2009; Wilson, 1984). Our findings show that nature provides a space for participants to engage their physical bodies through activities like hiking and farming, and to mentally reflect and let go of stress. Although only one participant explicitly discusses her spiritual connection to nature, several participants allude to spiritual experiences in nature. Nature provides the social opportunity for participants to learn from teachers who connect UAW to nature and increase their Environmental Literacy, which supports environmental health. Based on these findings, we think that prescribing nature, which parallels the literature (Razani, et al., 2015), has strong holistic health implications.
We suggest highlighting the HNR as a health component in holistic health curriculums since we find it to have a positive impact on our participants. The incorporation of nature-based modalities into holistic health education and practice offers experiential nature connection for students and practitioners. Education and experiential learning emphasizing the effects of nature-based restoration, stress reduction, and resiliency building may inspire students and practitioners to incorporate these modalities into their personal and professional lives. Learning about nature-based therapeutics or nature-based spirituality through classroom education and urban and wilderness retreats prepares students to explore their own HNR and professionally recognize these facets in others. Additionally, cross-disciplinary collaboration between holistic health educators, practitioners, and developers of youth community programs could create urban nature-based programs that nurture the HNR and connect UAW with urban nature.

**Community.** This research is important for communities on local and policy levels. Based on the results of this study and previous literature (Barton et al., 2016; Ray, 2007; Whittington, 2005), we know that wilderness programming supports the HNR of UAW. Our findings also suggest that participants do not always have the time or resources to participate in wilderness programming. Urban nature offers daily nature connection, yet participants’ consideration of urban and wild nature as differing and separate entities shows there is a perception that nature in these spaces holds different value. Increasing awareness of urban nature’s benefits through urban nature-based community programming could encourage UAW’s use of these spaces, expanding their HNR and supporting their holistic health and well-being. Urban nature-based programming may shift UAW’s perception that urban nature is exclusive from the wild nature they connect with awakening an awareness of the benefits that nature within the urban setting holds and opening UAW to new ways to connect with urban and wild nature.
Multidimensional urban nature-based programs connecting youth to urban nature in a variety of ways could support biopsychosocial, spiritual, and environmental dimensions of their health and strengthen their HNR. Currently, urban garden programs connect urban youth with urban nature (Grassroots Action Network, n.d.; Lefevre, 2015), but based on our first finding, Authenticity of Nature, a wider range of urban nature-based programming highlighting authentic elements of nature (e.g., plant identification walks) could help connect a wider range of UAW with nature in the urban setting. Experiential youth nature education presenting the health benefits of nature exposure (e.g., attention restoration, stress reduction, resilience building) may also increase UAW’s use of urban nature spaces. Previous research suggests that mindfulness-based stress reduction programs help urban youth change perceptions, experiences, and perspectives (Kerrigana et al., 2011). Urban nature-based mindfulness activities eliciting sensory experiences and presence in the natural surroundings could shift UAW’s focus from disruptors of the HNR in the urban environment to a view that notices the vast amount of nature existing in the urban environment and experiences the restoration of urban nature.

Our participants report that they value teachers of nature. Urban nature programming taught by people who honor nature’s authenticity can connect UAW with urban nature and nature teachers in the community, which builds relationships and community cohesion (GUÉGUEN & Stefan, 2016; Matsuoka & Sullivan, 2011; Weinstein et al., 2015; Weinstein, Przybylski, & Ryan, 2009), and nurtures the HNR of all involved. Designing urban nature programming with a community engagement approach (e.g., outreach and collaboration) could bridge urban nature youth programming, urban nature teachers, and the broader community.

Our findings show that modern living, the built urban environment, and social factors disrupt the participants’ HNR. Participants report needing clean, safe, and well-maintained urban
nature spaces to connect with, but our findings highlight a lack of community involvement in caring for public parks. One avenue to mitigate urban factors disruptive to UAW’s HNR, such as pollution, is community green space clean-up events. Shwartz et al. (2012) found a positive correlation between engaging urban communities in conservation days and short-term interest in local urban biodiversity. Regular community engagement and service could encourage active participation in the community and contribute to the maintenance of urban nature spaces. This intentional way of connecting community members with nature could also increase pro-environmental behaviors (Hedlund de-Wit, 2013; Niemela et al., 2011; Nisbet et al., 2011) for youth and adults. Additional grassroots efforts to enhance community urban nature spaces could include semi-regular nature-based events in parks or other urban green spaces. Possible outcomes of these events could include education, connecting UAW and community members with nature teachers, nurturing a sense of place (Frumkin, 2003), and community building. Such events encourage both youth and adults to spend time in and connect with nature spaces, enhancing human and environmental health.

Implications for policy include incorporating the perspectives of UAW into urban nature planning. Our findings show that urban adolescent women have a strong connection to nature. However, they experience the urban environment as disruptive to this connection. While parks, green spaces, and other urban nature places exist and some participants use them, they do not experience these spaces as places to connect with nature. Our findings show that participants want better-maintained spaces, free of pollution, and containing more wild nature elements such as wooded areas and flowers. Policy and urban nature space planning that listens to and incorporates the voices and perspectives of UAW will create urban nature spaces young women can connect with and want to return to. In addition to creating more wilderness oriented urban
nature spaces, policy makers should continue to support and increase funding for wilderness programs that connect UAW to wild nature. Due to the positive responses our participants share regarding wilderness retreats, there is a strong need to continue to offer wilderness programming. Our results show that wilderness immersion influences participants’ experience, perception, and relationship with nature, positively influencing their HNR. In addition to youth participation in planning and policy, further research can inform its direction.

**Research.** This study fills a gap in the literature by providing foundational information on the lived experience of UAW relative to their HNR and urban nature. Information on this specific population and location in relation to the HNR did not exist in the literature. Participants and researchers of this study show that a strong HNR exists for this population; however, the urban environment, even parks and green space, do not support this relationship for UAW with previous wilderness immersion experience. Implications for further study include: evaluation research on current urban nature programs focusing on developing the HNR among youth and young women, applied research to learn about urban nature programming that might support the HNR of UAW in an urban setting, and participatory action research incorporating the voices and interest of this population into urban nature program development that will support UAW’s HNR.

Additional phenomenological inquiry for UAW not already engaged in nature programing will provide a clearer picture of UAW’s HNR. Using precise inclusion and exclusion criteria of UAW who have not experienced nature programming will reveal if UAW without wilderness immersion or nature programming hold different perceptions of urban green spaces. This criterion has the potential to show if there is a difference in the HNR for UAW who have not experienced wild nature immersion when compared to UAW who have this experience.
In future research, we recommend using a wider range of qualitative methods such as photovoice, drawing, or journaling, because these methods illicit aspects of the HNR that interviewing and verbal articulation cannot. These alternative qualitative methods could be especially beneficial to research attempting to describe or learn about spiritual elements of the HNR for youth. While the spiritual experience of nature for UAW surfaced in this project, further research addressing this topic could enhance understandings of this experience.

We also suggest expanding research on the HNR to larger quantitative studies to gather more generalizable information to a variety of populations. Research on the HNR will benefit from cross disciplinary teams (e.g., holistic health, education, and urban planning) since it affects human (and ecological) life in multifaceted and interconnected ways. Combining the lenses (paradigmatic and theoretical) of multiple disciplines can create research that better encompasses the complexities of the HNR, presenting information and actions to nurture the HNR, human health, and ecological sustainability in our increasingly complex societies.

Conclusion

While we live in an increasingly urban and modernized world, this research shows that female-identified youth continue to have a strong connection to the nature. Our phenomenological interview methodology elicits ten UAW’s lived experiences of their HNR in one Midwestern metropolitan area. Through our emergent research design, and Interpretative Phenomenological Analysis three main themes surfaced: Authenticity of Nature; Connection to Nature, Self, and Others; and Disruption of the Human-Nature Relationship. These themes show that UAW connect with nature’s authentic elements, which assist them in attuning with themselves and experiencing restoration. They learn from nature’s organic processes and value
people who connect them with nature. Yet in the city, modern lifestyles, elements of the urban environment, and social factors disrupt their daily lived experience of their HNR.

These themes both echo and diverge from previous research. Findings consistent with the literature include participant biophilia (Wilson, 1984), connection to and creation of “sense of place” in more natural nature spaces (Frumkin, 2003, p. 1453; Lloyd et al., 2008), experience of nature as restorative (Kaplan & Kaplan, 1989; Lloyd et al., 2008; Wiens et al., 2016), and barriers to urban nature access and use for urban youth (Gearin & Kahle, 2006; Mahdiar & Dali, 2016); while unexpected findings are youth connection to nature, nature’s authenticity, teachers of nature, and spirituality.

Fostering the HNR, especially within the urban environment, fosters participant health and ecological sustainability. Our participants offer insights into their relationship with nature and how this relationship can grow in ways that are meaningful to them, including continued wilderness exposure, connecting with nature teachers, community engagement in urban nature spaces, and inclusive urban nature space planning. Future research engaging the community (PAR) and multidisciplinary teams will inform research communities and create platforms to apply these and future findings.
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Appendices
Appendix A
Invitation Email

Hello (Community Organization Contact Person),

You are receiving this email because you have been identified as a potential community partner for our graduate thesis research project through the Masters of Arts in Holistic Health Studies program at St. Catherine’s University.

For our study, A Phenomenological Description of the Human-Nature Relationship: Urban Adolescent Women and Urban Nature, we are interested in connecting with urban, female-identified individuals between the ages of 13 and 18 to learn about their perspectives of, and relationship with, nature. Our research question, What is the lived experience of urban adolescent women relative to their human-nature relationship, urban nature, and their perceptions of the same? will be explored during face to face interviews. Participants will be asked to participate in an interview as well as a follow-up meeting allowing them to review the data analysis for accuracy. Details of our project including your responsibilities if you choose to partner with us are attached to this email.

If you are interested in being a community partner for this research, or if you have additional questions, please contact: Shyla Earl at [removed email from here] and/or Erin Heinitz at [removed email from here].

Our Gratitude,
Shyla & Erin
The purpose of this study is to conduct a phenomenological inquiry into the lived experience of urban adolescent women to describe their human-nature relationship, particularly with urban nature, and their perceptions of the same. We are researching this topic because the human-nature relationship offers a broad range of health and wellness benefits to humans and the environment. However, context (age, gender, urban living, etc.) and individual perspectives of nature influence this relationship. Therefore, asking, listening to, and learning about the perspectives urban adolescent women hold of urban nature offers insight into their unique relationship with nature.

Our recruitment process includes:

- Emailing this initial Invitation to Participate letter to potential community partners
- Identify community partners and potential participants
- Receiving a Document of Approval from our community partner/s (we’ve attached a template for you to view/use)
- Distribution of informational Flyers to potential participants through the community partner/s
- Establishing Informational Session/s for interested participants through the community partner/s (during this meeting we will discuss the research, screen participants, distribute parental consent and youth assent forms, and establish the interview time and location)

Your role as a community partner will be:

- Email us a Document of Approval for your agency (template attached)
- Distribute informational flyers to potential participants (flyer attached)
- Help us set up an Informational Session at your location for potential participants
- As needed, collect participant consent and assent forms (forms attached)

Potential risks involved with this study include:

- Privacy invasion resulting from a breach of participant confidentiality
- Psychological stress resulting from sharing sensitive information during participant interviews

Precautions taken to minimize the potential for these risks include:

- Receiving approval from the St. Catherine University Internal Review Board
- Obtaining signed written parental consent and youth assent forms outlining all risks involved with this study
- Using participant-chosen pseudonyms during the entire interview process
- Storing any identifying information about participants in a locked safe, separate from transcripts and data analysis
- Requiring the transcriptionist to sign a confidentiality agreement
- Storing de-identified interview transcripts and data in two password-protected computers
- Destroying Interview recordings upon completion of the second, follow-up meeting with each participant
- Combining participant responses following data analysis to minimize individual exposure
- Removing and/or changing any identifiable data when directly quoting a participant
- Give participants the opportunity, while verifying our representation of their data, to redact any quotes or representation that they feel may identify them
- Providing a list of affordable local psychological services if the interview or any part of this research process triggers psychological discomfort or injury for the participant/s
Appendix C
Document of Approval

[Attach official letterhead- if available]

Documentation of Approval

Title of Organization
Street Address
City, State, Zip Code

To whom it may concern:

This letter acknowledges that I have received and reviewed a request by Shyla Earl and Erin Heinitz to conduct a research project entitled: A Phenomenological Description of the Human-Nature Relationship: Urban Adolescent Women and Urban Nature at [title of organization] and I approve this research to be conducted at our facility. When the researchers receive approval for their research project from St. Catherine’s University Institutional Review Board, I agree to provide access for the approved research project.

Sincerely,

[name]
[position/title]
[phone/email]
Appendix D
Recruitment Flyer

A Phenomenological Description of the Human-Nature Relationship: Urban Adolescent Women and Urban Nature

You are invited to participate in a research study.

Who is eligible? Female identified urban residents between the ages of 13 and 18 (if you are under the age of 18 parental/guardian consent will need to be obtained)

Purpose: The purpose of this study is to conduct a phenomenological inquiry into the lived experience of urban adolescent women to describe their human-nature relationship, particularly with urban nature, and their perceptions of the same. This study is important because the human-nature relationship offers a broad range of health and wellness benefits for humans as well as the environment. We want to know how young urban women view and experience this relationship.

What’s expected? Participate in a 30-60 minute open-ended semi-structured interview with one of the researchers. Participate in a 15-45 minute follow up session to review our data analysis of your answers to make sure we represent your answers in the way you meant them.

Incentives: Two gift card incentives are available for participation. When we are finished with the interview, we will give you a $10 gift card. In a second meeting, once you review the written words of what you said in the interview, we will give you another $10 gift card.

Interested in participating? We will be conducting an informational session to discuss details of the study, distribute informed consent and assent forms, and to establish date/time/location of each interview.

Contact Information:
For more information please contact

Shyla and Erin at [removed@emailfromhere]@gmail.com
Appendix E  
Parental Consent Form

ST. CATHERINE UNIVERSITY  
Informed Consent for a Research Study

Study Title: A Phenomenological Description of the Human-Nature Relationship: Urban Adolescent Women and Urban Nature

Researchers: Shyla Earl, B.S., and Erin Heinitz, B.A.

Your child is invited to participate in the research study, A Phenomenological Description of the Human-Nature Relationship: Urban Adolescent Women and Urban Nature. We are interested in learning about her specific relationship with nature. This research is being done by Shyla Earl and Erin Heinitz, Masters’ students at St. Catherine University. Our faculty advisor for this study is Carol Geisler, Ph. D., Associate Professor, Master of Arts in Holistic Health Studies at St. Catherine University.

The purpose of this study is to conduct a phenomenological inquiry into the lived experience of urban adolescent women to describe their human-nature relationship, particularly with urban nature, and their perceptions of the same. This study is important because the human-nature relationship offers a broad range of health and wellness benefits for humans as well as the environment. Approximately six to twelve urban adolescent women age 13-18 are expected to participate in this research. Below, you will find answers to the most commonly asked questions about participating in a research study. Please read this entire form and ask questions before agreeing to have your child be in the study.

If your child is under the age of eighteen, written parental or guardian consent is needed for their participation in this study.

Why has my child been asked to be in this study?

Your child has been asked to be in this study because they identify as a female, are 13-18 years old, and live in a city.

If I decide my child can participate, what will she be asked to do?

If your child meets the criteria and you agree to have her be in this study, she will be asked to do these things:

- Interview with one of the researchers for 30-60 minutes, answering these five questions:
  - What does the word “nature” mean to you?
  - Describe a time when you had an experience of “nature”?
  - In the city, do you feel nature is available to you? How does this affect your relationship with nature?
  - Please describe your experience of urban nature.
  - Is there anything else related to this topic that you would like to tell us?
• Attend a 15-45 minute follow up meeting to talk about our understanding of your child’s answers to make sure we understand them.

In total, this study will take approximately forty-five minutes to two hours over two sessions.

What if my child decides that she doesn’t want to be in this study?

Participation in this study is completely voluntary. If your child decides that she does not want to participate in this study, please feel free to say so, and do not sign this form. If she decides to participate in this study, but later changes her mind and doesn’t want to anymore, simply notify any one of us and she will be removed from the study. Please note that once your child’s answers are included in our analysis (usually within one week of the interview) we will not be able to remove them from the study. Her decision to participate or not participate will have no negative or positive impacts on her relationship with St. Catherine University, or with any of the students or faculty involved in the research.

What are the risks (dangers or harms) to my child if she is in this study?

While the risks of this study are low it is important for you to know about them. There is a slight chance that someone outside of the study might be able to figure out who your child is based on her answers. This can be uncomfortable or embarrassing for some people. To limit this possibility, we will ask her to give us a fake name, known as a pseudonym. This fake name will be the only name we will use when we talk about her answers. We will also protect your child’s answers with passwords on our computers.

Sometimes people feel uncomfortable when answering questions because what they talk about is difficult. If your child feels uncomfortable during the interview, we can stop at any time. She can also skip any questions she wants to. If answering these questions makes your child uncomfortable, she might want to talk to someone about it. If she wants to do that, we will give her a list of local affordable services to help her find professional care. Paying for this care is your or your insurance’s responsibility. If your child has psychological research-related stress, please let us know right away.

What are the benefits (good things) that may happen if my child is in this study?

There are no direct benefits to your child for participating in this research; however, our intention for this research is to voice participants’ unique experiences of their relationship with nature. Indirect potential benefits include contributing to the literature.

Will my child receive any compensation for participating in this study?

Your child will be offered two $10.00 gift cards. When we are finished with the first interview, we will give her a $10 gift card. After the follow-up meeting, where we will talk about our understanding of her answers, we will give her another $10 gift card.
What will you do with the information you get from my child and how will you protect her privacy?

The information provided for this study will be audiotaped and your child’s words will be turned into written form, this is called transcription. To protect her privacy, we will: 1. Use a fake name (or pseudonym), chosen by your child, during the interview, transcription, and analysis processes; 2. Limit the amount of people who will be able to see the information from the interview to only the researchers (Shyla and Erin) and the research advisors (Carol and Stasia); 3. Keep all direct information about her in a locked safe; 4. Have the transcriptionist (person helping to move audiotaped words into written words) sign a confidentiality agreement; 5. Store interview transcripts and answers in two password-protected computers; 6. Delete interview recordings after the second, follow-up meeting; 7. Remove and/or change information that could identify your child if we use her direct words in our report; 8. Give your child the chance, while verifying our understanding of their answers, to remove any quotes or representation that they feel may identify them; 9. Combine answers with other people in the study.

We will finish looking at your child’s answers by May 17, 2016. On this day, we will destroy all original reports, identifying information, audio recordings, and transcribes.

Any information provided will be kept confidential, which means other people will not know who your child is in any written reports or publications. If it becomes useful to disclose any of her information, we will seek your permission and tell you the persons or agencies to whom the information will be furnished, the nature of the information to be furnished, and the purpose of the disclosure; you will have the right to grant or deny permission for this to happen. If you do not grant permission, the information will remain confidential and will not be released.

Are there possible changes to the study once it gets started?

During this research study if we learn about new findings that might influence your child’s willingness to continue participating in the study, we will inform you of these findings.

How can I get more information?

If you have any questions, please ask them before you sign this form. You can contact the researches Shyla Earl and Erin Heinitz directly at removed_emailfromhere@gmail.com. If you have additional questions later and would like to talk to the faculty advisor, please contact Dr. Carol Geisler at cgeisler@stkate.edu. If you have questions or concerns regarding the study and would like to talk to someone other than the researchers, please contact Dr. John Schmitt, Chair of the St. Catherine University Institutional Review Board, at (651) 690-7739 or jsschmitt@stkate.edu.

You may keep a copy of this form for your records.
Statement of Consent:

I consent for my child to participate in the study and agree for her to be audiotaped.

My signature indicates that I have read this information and my questions have been answered. I also know that even after signing this form, I may withdraw from the study by informing the researchers.

____________________________________________________________
Signature of Participant          Date

____________________________________________________________
Signature of Parent, Legal Guardian, or Witness          Date

____________________________________________________________
Signature of Researcher          Date
Appendix F
Assent Form

A Phenomenological Description of the Human-Nature Relationship: Urban Adolescent Women and Urban Nature

Our names are Shyla Earl and Erin Heinitz. We are trying to learn about the perceptions urban adolescent women have of urban nature to gain a better understanding of what this relationship looks like. If you would like, you can be in our study.

If you decide you want to be in the study, you will be asked to participate in a 30-minute information session, a 30-60 minute interview with one of the researchers, and a 15-45 minute follow-up meeting to make sure we represent your answers correctly.

We will ask you to pick a name, also known as a pseudonym that you would like us to use when referring to your answers. This will help protect your privacy. Although we will do our best to keep your identity separate from your answers, privacy invasion is a possible risk involved with being in this study. Another possible risk is psychological discomfort caused by talking about sensitive topics related to your experiences with nature. There are no direct benefits to you for being in the study, but we hope that by participating in this study we can work together, as researchers and co-researchers, to give voice to your unique experiences.

Other people will not know if you are in our study. We will put information we learn about you together with information we learn about other young women, so no one can tell what information came from you. If we use your direct words in our report, we will remove and/or change anything that could connect you with the answer. When we tell other people about the research, we will use your pseudonym so no one can tell we are talking about you.

Your parent/s or guardian must say it is okay for you to be in the study. After they decide, you get to choose if you want to do it too. If you don’t want to be in the study, that is okay. No one will be upset by your decision. If you want to be in the study now and change your mind later, that’s okay too. You can stop participation at any time although once the answers you give us in the interview are included in our analysis, we will not be able to take them out.

If you have any questions about the study, or if you decide you don’t want to be in the study anymore, email us at [removedemailfromhere@gmail.com]

I will give you a copy of this form in case you want to ask questions later.

Agreement

I have decided to be in the study even though I know that I don’t have to. Shyla and Erin have answered all my questions.

______________________________  ______________________
Signature of Study Participant  Date

______________________________  ____________
Signature of Researcher  Date
Appendix G  
Demographic Questionnaire

A Phenomenological Description of the Human-Nature Relationship: Urban Adolescent Women and Urban Nature

Demographic Questionnaire

To help answer our research question, we would like to know a little more about you. To protect your privacy, we ask that you provide us with a name other than your own to use when we talk about your answers; your pseudonym. If you don’t want to, you do not have to answer the remaining questions. However, our study wants to know about your view nature and all the unique pieces of you inform that view. That is why we ask these questions.

Preferred pseudonym: ____________________________________________________________

What is your age? ____________________________________________________________________

What are your racial and ethnic identities? ____________________________________________

What city and neighborhood do you live in? __________________________________________

Does your family qualify for free or reduced school lunch? _____________________________

Do you have family members who spend time in nature? _______________________________

Do you spend time in nature? If not, what other activities do you enjoy? ______________

_______________________________________________________________________________
Appendix H
Interview Schedule

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The Interview Schedule

To answer the question, “What is the lived experience of urban adolescent women relative to their human-nature relationship, urban nature, and their perceptions of the same?” we are asking five open-ended questions. Ultimately, we are interested to hear about your unique relationship with nature, so, the questions listed below are only suggestions. This list is called the Interview Schedule.

1. What does the word “nature” mean to you?
2. Describe a time when you had an experience of “nature”?
3. In the city, do you feel nature is available to you? How does this affect your relationship with nature?
4. Please describe your experience of urban nature.
5. Is there anything else related to this topic that you would like to tell us?

Contact Information:
For more information please contact

Shyla and Erin at removedeemailfromhere@gmail.com
Appendix I
Interview Protocol

Date:
Place:
Interviewer:
Participant (Pseudonym):

Pre-Interview Checklist:

☐ Arrive to the interview location thirty minutes prior to the scheduled interview time
☐ Find and prepare interview space
☐ Prepare documentation (i.e. interview protocol, demographic questionnaire, psychological services, incentive tracking/receipt)
☐ Check recording device battery and recording ability
☐ Complete a five-minute meditation/grounding exercise
☐ Greet interviewee/re-introduce self
☐ Direct participant to interview space
☐ If applicable, collect signed consent and assent forms
☐ Ask participant to state the purpose of the interview and verbally consent their participation
☐ Outline process of interview/discuss the following:
  o Note taking and audio recording procedures
  o Remind participants that their: ‘story is what is important to us, however, it is also important to stay on topic, answering as many questions as possible.’
  o Disclose that if at any time participants are uncomfortable or don’t want to answer the question, they just need to tell us that and we can move onto another question or end the interview
  o Psychological resources in the event that they feel stressed from the interview.
  o Expectation of completing the majority of the questions in order for their interview to be complete and incentives to be received
  o Purpose of demographic questionnaire: ‘To help answer our research question, we would like to know a little more about you. To protect your privacy, we ask that you provide us with a name other than your own to use when we talk about your answers; your pseudonym. If you don’t want to, you do not have to answer the remaining questions. However, our study wants to know about your view nature and all the unique pieces of you inform that view. That is why we ask these questions.’
☐ Pass out demographic questionnaire and writing utensil
☐ Collect demographic questionnaire
☐ Once these steps are complete, turn on recording device and begin interview (see questions below)
Interview Questions:

1. What does the word “nature” mean to you?

2. Describe a time when you had an experience of “nature.”

3. In the city, do you feel nature is available to you? How does this affect your relationship with nature?

4. Please describe your experience of urban nature.

5. Is there anything else related to this topic that you would like to tell us?

Additional notes:
Post-Interview Checklist:

- Begin debriefing: “I have no further questions. Do you have anything more you want to bring up, or ask about, before we finish the interview?” (Kvale, 1998, p. 128).
- Mention interview main points and allow for feedback (Kvale, 1996, p. 128).
- Finalize debriefing and turn off recording device.
- Check in with participants to see how they are feeling and if they are experiencing any psychological distress.
- Hand out psychological services form to each participant including steps to take if they begin to experience psychological distress later.
- Have participants sign gift card incentive receipt and hand out one $10 gift card.
- Explain the next steps (i.e. our transcription timeline, follow-up check-in/meeting).
- Schedule follow up meeting.
- Ask participant if they have any further questions.
- Conclude interview with thank you statement: Thank you so much for the taking the time to participate in this interview. Your responses are valuable in understanding more about the human-nature connection for urban adolescent women and urban nature.
- After participant leaves, take ten minutes of quiet time to recall/reflect on interview.
- Take notes (i.e. consider participant voice, facial, and body expressions, interpersonal interaction, etc.) (Kvale, 1998).
- Collect all paper documentation for storage in a secure locked file.

Reflection Notes:
Appendix J
Psychological Services
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Psychological Services
If this research activity results in psychological stress, this list includes affordable local resources to assist you in finding professional psychological care. Any professional care for research-related injuries should be paid by you or your insurance company. If you think you have suffered a research-related psychological injury, please email us immediately at:

removedemailfromhere@gmail.com.

<table>
<thead>
<tr>
<th>Name</th>
<th>Contact Information</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CanvasHealth: Crisis Connection</td>
<td>612-379-6363 or 866-379-6363</td>
<td>Free, immediate, 24 hour crisis support by phone or text</td>
</tr>
<tr>
<td>Community University Health Care Clinic</td>
<td>2001 Bloomington Ave, Minneapolis, MN 612-638-0700</td>
<td>Sliding fee scale</td>
</tr>
<tr>
<td>Neighborhood HealthSource Central Clinic</td>
<td>2610 Central Ave NE Minneapolis, MN 612-781-6816</td>
<td>Sliding fee scale</td>
</tr>
<tr>
<td>NorthPoint Health &amp; Wellness Center</td>
<td>1313 Penn Ave N. Minneapolis, MN 612-543-2500</td>
<td>Sliding fee scale. Walk-in and scheduled appointments available</td>
</tr>
<tr>
<td>Family Tree Walk in Clinic Counseling</td>
<td>1619 Dayton Ave. #205 St. Paul, MN 651-645-0478</td>
<td>Provides free walk-in appointments, donations accepted</td>
</tr>
</tbody>
</table>
Appendix K
Gift Card Receipt

A Phenomenological Description of the Human-Nature Relationship: Urban Adolescent Women and Urban Nature

Receipt of Gift Card

By signing this form, I acknowledge that I have received a $10 gift card incentive for completing the interview.

Date: ____________________  
Gift Card Number: _______________________________________________________
Signature of Participant: ____________________________________________________
Signature of Research: ______________________________________________________

---------------------------------------------------------------------------------------------------------------------

By signing this form, I acknowledge that I have received a $10 gift card incentive for completing the follow-up meeting.

Date: ____________________  
Gift Card Number: _______________________________________________________
Signature of Participant: ____________________________________________________
Signature of Research: ______________________________________________________
Appendix L
Follow-Up Interview Protocol

Date:
Place:
Interviewer:
Participant (Pseudonym):

Pre Follow-Up Interview Checklist:

☐ Arrive to the interview location fifteen minutes prior to the scheduled interview time
☐ Find and prepare interview space
☐ Prepare documentation (i.e. follow-up interview protocol, tracking/incentive receipt)
☐ Complete a five-minute meditation/grounding exercise
☐ Greet interviewee/re-introduce self
☐ Direct participant to interview space
☐ Outline process of follow-up interview/discuss the following:
  ○ Check-in with participant regarding psychological wellness related to the interview process
  ○ Disclose that if at any time participants are uncomfortable or don’t want to continue the follow-up, they just need to tell us that and we can move onto another question or end the interview
  ○ Psychological resources in the event that they feel stressed from the interview.
  ○ Expectation of completing the majority of the follow-up interview in order for their interview to be complete and incentives to be received
  ○ Explain the purpose of the follow-up interview (to ensure the accuracy of data representation) (i.e. clarification of content, presentation of themes, elicit feedback etc.)
  ○ Inform participant of recording and note taking
  ○ Turn on recording device

Follow-Up Notes:
Post Follow-Up Interview Checklist:

- Begin debriefing: "I have no further questions. Do you have anything more you want to bring up, or ask about, before we finish the follow-up interview?" (Kvale, 1998, p. 128).
- Check in with participants to see how they are feeling and if they are experiencing any psychological distress.
- Have participants sign gift card incentive receipt and hand out one $10 gift card.
- Explain the next steps (i.e. data analysis, distribution of content to community, research night May 17).
- Ask participant if they have any further questions.
- Conclude interview with thank you statement: Thank you so much for the taking the time to participate in this project. Your responses are valuable in understanding more about the human-nature connection for urban adolescent women and urban nature.
- After participant leaves, take ten minutes of quiet time to recall/reflect on follow-up interview.
- Take notes (i.e. consider participant voice, facial, and body expressions, interpersonal interaction, etc.) (Kvale, 1998).
- Collect all identifying paper documentation for storage in a secure locked file.

Reflection Notes: