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Collectivism in central Appalachia: Educational and career implications

Heidi Leigh Creamer

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**COLLECTIVISM IN CENTRAL APPALACHIA:
EDUCATIONAL AND CAREER IMPLICATIONS**

A thesis submitted to
the Graduate College of
Marshall University
In partial fulfillment of
the requirements for the degree of
Education Specialist
in
School Psychology

by
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Approved by
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July 2019

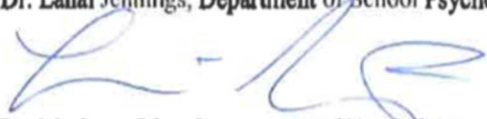
APPROVAL OF THESIS

We, the faculty supervising the work of Heidi Leigh Creamer, affirm that the thesis, *Collectivism in Central Appalachia: Educational and Career Implications*, meets the high academic standards for original scholarship and creative work established by the Marshall University School Psychology Program and the College of Education and Professional Development. This work also conforms to the editorial standards of our discipline and the Graduate College of Marshall University. With our signatures, we approve the manuscript for publication.

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7-1-19

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DEDICATION

This thesis is dedicated to the love of my life, James Nathan Hammond (1983-2019), who pushed me daily to follow my dreams. Words cannot describe how your unfailing love and support have impacted my life, let alone the completion of this project. I appreciate the endless conversations and debates on things that mattered, not only to me, but to you as well:

Appalachia, coal, and family. Thank you for being my constant sounding board. I will forever miss your intelligence and wit, as you constantly kept me on my toes and challenged me to be my best. Your passion will continue to inspire me in everything I do. ...Until we meet again, B.

“So you have sorrow now, but I will see you again; then you will rejoice, and no one can rob you of that joy.” – John 16:22

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ABSTRACT

Individualistic cultures tend to focus on freedom, individuality, and personal autonomy. Mainstream America is found to be a vertical individualistic society, but research has shown there are pockets of collectivistic cultures within the US. Collectivistic cultures, in contrast, tend to focus on family, conformity, and thinking of the group before one's self. Collectivism arises due to a population's need to rely on one another for resources. As such, low resource environments are subject to having collectivistic values. Research suggests that collectivism rates are higher in impoverished areas, such as Appalachia. This investigation focused on central Appalachia and the attributes that may point to a collectivistic culture, such as poverty, parental support, and emotional proximity to family. Specifically, researchers surveyed 99 college students in central Appalachia to assess the extent to which they endorsed statements associated with horizontal and vertical individualism and collectivism. Collectivistic factors were additionally examined to determine how collectivistic beliefs were related to attitudes toward education, relocating, and the coal industry. Of those surveyed, most individuals reported higher horizontal individualism and collectivism values. This indicates that participants tended to value status within their group, along with fairness and equality among members. There are some differences, however, with those scoring higher on horizontal individualism valuing in-group status, but also valuing autonomy. Those with higher horizontal collectivism rates tended to rely on the group. In addition, freedom and autonomy is less sought after in this culture.

CHAPTER 1

LITERATURE REVIEW

Individualism versus Collectivism

According to Shulruf, Hattie, and Dixon (2007), individualistic cultures emphasize one's self, focusing on freedom of choice, personal autonomy, self-fulfillment, and distinction in attitudes and opinions. Within this culture, self-reliance is boasted, and dependence upon others is considered to be shameful and embarrassing (Cherry, 2019). Additionally, those in individualistic cultures emphasize facets of personal success, status, and competition (Shulruf et al., 2007). In agreement, Gorodnichenko and Roland (2010) find that individualistic cultures award social status and personal accomplishments, such as innovations, artistic achievements, and important discoveries. Furthermore, those in individualistic cultures tend to communicate in direct and assertive terms, with a higher likelihood of using "I" more than "we."

Collectivistic cultures, on the other hand, promote selflessness, and putting the needs of the community before one's self (Cherry, 2019). Within this culture, family cohesion, solidarity, cooperation, and conformity are valued (Basu-Zharku, 2011). Carteret (2010) contends that, within collectivistic cultures, it is common to find multi-generational households. Here, at least three generations may live together, usually being the grandparents, adult children, and grandchildren.

According to Gorodnichenko and Roland (2010), collectivism encourages conformity while discouraging individuals from standing out from the group. In short, as stated by Shulruf et al., (2007), "collectivism includes a sense of belonging and duty to in-groups, interdependence with group members, maintenance of one's social status, seeking harmony and avoiding conflicts, and a preference for an indirect communication style" (p. 386).

In general, it is found that individualism and collectivism rates are examined on a larger scale, mostly by country. For example, Hofstede (1980) found that regions such as North America, Western Europe, New Zealand, and Australia operate as individualistic cultures, while those in Africa, the Middle East, East Asia, and South America have, historically, operated as collectivistic cultures. Hofstede (1980) further argues that individualism and collectivism serve as a bipolar construct, which produces a distinction between cultures. In agreement, Triandis (1995) states that there are many distinctions between individualism and collectivism when comparing countries. Two countries may be considered individualistic, but present with several differences. For instance, both Australia and the US are considered individualistic, though vary in the type of individualism in which they present. As such, there are two representations to consider when examining individualism and collectivism: horizontal and vertical. Scales for the two were constructed by Singelis, Triandis, Bhawuk, and Gelfand (1995), in which the following are examined in relation to culture: Horizontal individualism, vertical individualism, horizontal collectivism, and vertical collectivism. Noordin (2009) states that horizontal representations concede that an individual is comparable to every other individual within the society. Vertical patterns include hierarchies, in which an individual is different from the others within a society.

According to Shavitt, Johnson, and Zhang (2011), horizontal individualistic societies, such as Sweden, Denmark, and Australia, generally perceive themselves as equal to others in status. However, an individual assumes an autonomous position, but does not place importance on hierarchal status (Noordin, 2009). Overall, one may see themselves as independent, but also as being the same as others within the culture. While still considered individualistic, the United States, United Kingdom, and France differ from those within the horizontal group. They fall under the vertical representation of individualism (Shavitt, Johnson, & Zhang, 2011). Those

within this culture tend to value individual status, as is the same as the horizontal representation. However, according to Noordin (2009), the two differ in that the vertical representation places emphasis on hierarchy, as inequality is expected. Individuals consider themselves separate, or unique, from others within their society. Competition is favored.

Triandis (1995) explains that those within a horizontal collectivistic culture may perceive themselves as an aspect of an in-group. According to Sivadas, Bruvold, and Nelson (2008), Israel Kibbutz is the best example of the horizontal representation of collectivism. Noordin (2009) explains that all members within this society tend to be very similar, as the individual self is merged with the members of their in-group. Equality tends to be valued within this representation. In agreement, Shavitt et al. (2011) state that horizontal collectivists tend to lean toward sociability and interdependence with others, believing that all people are equal and deserve equal rights and opportunities. Triandis and Gelfand (1998) concede that individuals here value equality, but not freedom. In comparison, those within a vertical collectivistic society do not value equality nor freedom. Countries within this representation are East Asia, India, and Eastern Europe (Shavitt et al., 2011). These societies may be perceived as traditional societies with strong leaders, lending themselves to fascism or communalism (Triandis and Gelfand, 1998). In concordance, Dickson, Den Hartog, and Mitchelson (2003) define vertical collectivism as a culture that considers themselves as part of a group despite its members having different statuses. Those in this culture value the in-group preservation of integrity, even at the expense of one's self. Here, individuals will sacrifice their own interests for that of the group, as well as submit to authority.

Within the same country, however, individualism and collectivism may differ due to socioeconomic development. Bergmuller (2013) states that well-developed regions are likely to be more individualistic in nature, while under-developed regions tend to be more collectivistic. These findings may lead to suggest that pockets within the United States may be collectivistic in nature. Vandello and Cohen (1999) state that while the United States, overall, is an individualistic culture, when segmented into regions, there is a measurable variation. Findings show that within the United States, individualism is strongest in the Midwest and Great Plains. Collectivistic cultures are also depicted throughout the country, with the South having the strongest representation of collectivism (Vandello & Cohen, 1999). Aligning with research presented by Bergmuller (2013), higher collectivism rates are found in impoverished areas, such as the South. According to Moore (2018), nine of the ten states with the highest poverty rates are in the South: Mississippi, Louisiana, West Virginia, Kentucky, Alabama, Arkansas, Oklahoma, South Carolina, and Tennessee. Upon examination, six of the aforementioned states also fall within the Appalachian region. Tighe (2007) found those within Appalachia to be more collectivistic versus the individualistic orientation of mainstream American culture.

Appalachian Region

The Appalachian Regional Commission (ARC) defines the Appalachian Region as the 205,000 square miles that follow the Appalachian Mountains, spanning from southern New York to Northern Mississippi. Specific counties in each of the following states are considered part of the Appalachian region: Alabama, Georgia, Kentucky, Maryland, Mississippi, New York, North Carolina, Ohio, Pennsylvania, South Carolina, Tennessee, and Virginia. Additionally, West Virginia is the only state fully encapsulated within Appalachia (ARC, 2019).

Appalachia is divided into three sub-regions: northern, central, and southern. This study

aims to focus specifically on the central Appalachian region. According to the HAC, or Housing Assistance Council (2015), central Appalachia includes counties in eastern Kentucky, Ohio, and Tennessee; western counties in North Carolina and Virginia; as well as the whole state of West Virginia. According to Tang and Russ (2007), central Appalachia has the highest concentration of rural counties, as well as the fewest urban cities in the United States. The Appalachian region, according to Milstead (2012), is distinguishable by a mountainous terrain that shaped the history and culture of its people. According to Breckinridge (1972), there were few roads or urban areas within Appalachia, in which settlements were hard to reach. As such, many services of the time were not easily accessible. For instance, Breckinridge reports that the Frontier Nursing Service continued to serve patients on horseback in isolated “hollers” up until the 1950s.

Historically, the region was difficult to access, resulting in a large rural population. ARC (2019) states that 42 percent of the entire Appalachian region’s population is rural, compared with the national population of 20 percent. However, Couto (2004) states that about 83% of central Appalachia remains rural. The Appalachian Regional Ministry (2015) asserts that the mountains kept those living in Appalachia isolated from the rest of the country and from the influence and involvement of other people. As such, a distinctive culture was created.

Appalachian Culture

According to Merriam-Webster (2019), culture is defined as “the customary beliefs, social forms, and material traits of a racial, religious, or social group (p. 1).” Tighe (2007) explains that Appalachian values set this culture apart from mainstream America. Russ (2010) states that rather than being task-oriented, as individualistic cultures are, Appalachian culture tends to be more person oriented. Those within Appalachian culture tend to value modesty, cooperation, and religion. They also appear to be more satisfied than those within mainstream

culture, especially when basic needs are met for shelter, food, and transportation. It is not necessary to compete among one another in relation to material items, such as expensive houses or cars. Since mainstream America strives for independence and social status, Appalachian mindset could be mistaken for lack of ambition or self-esteem. Appalachians value equality, believing one should not boast or rise above their upbringing, nor think they are better than anyone. Furthermore, as stated by Tang and Russ (2007), social relationships within Appalachian culture appear less hierarchical than mainstream American culture in that social standing depends on familial ties. According to Maloney and Associates (2003), family connections are of greater value in social status than individual gains, such as obtaining degrees or honors. Family and community relationships are essential parts of Appalachian culture, with familial bonds providing a sense of identity and belonging (Tighe, 2007). In addition, Russ (2010) states that Appalachian culture is predominantly patriarchal, in which men and women are expected to fulfill certain roles. Males are expected to be the breadwinner, to take care of one's family, and rely on one's self to do such things. Females are expected to be subservient to the male, while being the nurturer and caregiver of the family.

Living in the mountains, far from cities and neighbors, and with poor roads, reliance on community and familial ties strengthened. The lack of a proper road system made it increasingly difficult to travel throughout much of central Appalachia, resulting in little to no industrial development. According to Russ (2010), this also increased a greater dependence on family and fictive kin, such as near neighbors, church members, and others in the community. In this region, especially throughout history, neighbors formed close-knit communities where they depended on one another for help and support. If in need of help, Appalachians first turn to family, including the extended family, such as the church and/or close neighbors, and then look to the community

next. Only as a last resort will they seek assistance from a government agency (Maloney and Associates, 2003).

Additionally, members share a mistrust of schools, and government in general, preferring independence and being in control. Isolation, reliance on family and community, and lack of industrial progress are key factors in developing a distrust of outsiders in Appalachia (Tang & Russ, 2007). Historically, Appalachia has had an influx of outsiders seeking resources such as cheap labor, timber, iron ore, and coal. According to Burns (2009), mapping, identification, and purchasing of natural resources in central Appalachia began in the eighteenth century, but did not fully take hold until the late nineteenth century when railroads found their way to the region. As such, many wealthy “outsiders” bought land in Appalachia, usually at a cheap cost, and incredible detriment to the original land owner. According to Eller (1982), land in the Pocahontas-Flat Top field was bought for \$1.50 to \$2.00 an acre, and within five years, that same land was worth over \$100 an acre. To examine historical significance, the following report by Mason, Bennet, and Bell (1884) allows for insight into the exploitation of West Virginia’s natural resources, which states:

The wealth of this state is immense; the development of this wealth will earn vast private fortunes far beyond the dreams even of a modern Croesus (Kre’ sus); the question is, whether this vast wealth shall belong to persons who live here and who are permanently identified with the future of West Virginia, or whether it shall pass into the hands of persons who do not live here and who care nothing for our state except to pocket the treasures which lie buried in our hills. If the people of West Virginia can be roused to an appreciation of the situation we ourselves will gather this harvest now ripe on the lands inherited from our ancestors; on the other hand if the people are not roused to an

understanding of the situation in less than ten years, this vast wealth will have passed from our present population into the hands of non-residents... (p. 170).

According to the Appalachian Land Ownership Task Force (1983), a study was conducted in eighty counties within the Appalachian region, which found that “of the 13 million acres of surface [land] sampled, 72 percent—almost three-quarters—were owned by absentee owners Four-fifths of the mineral rights in the survey are absentee owned. Almost 40 percent of the land in the sample, and 70 percent of the mineral rights are corporately held” (p. 14). In continuance, ATF states that with high rates of corporate and absentee land ownership, the area’s resources and economic opportunities are limited for Appalachian residents. As evidenced, land ownership in Appalachia increasingly fell into the hands of big companies, and with it were timber, mineral, gas, and coal rights. This practice was especially common within the Appalachian coalfields.

According to Burris (2014), the coal industry in central Appalachia created a single industry economy, which allowed for coal companies to obtain control over the people, politicians, land, and wealth of the area. As such, mono-economies developed, which resulted in Appalachians’ dependency on few industries. Burns (2009) concedes that coalmines were primarily owned by corporations based outside of the region. Though coal generated large profits, it did little to help the economy in Appalachia. Consequently, Guilford (2017) explains profits and economic growth did not occur in the Appalachian region. The benefits of corporate profits stayed with the home state of the corporation, rather than improving the economy where the coal was mined. Furthermore, Guilford explains that the state could reap benefits from miners’ wages and taxes, which may temporarily boost the area’s economy. However, once the coal runs out, communities have little to show for it. In addition, politicians failed to implement

adequate severance taxes. With adequate severance taxes in place, coal communities could have gained potential protection from boom and bust cycles, in which communities experience exponential growth in economy and jobs, but consequently, then, suffer economic devastation (Burris, 2014).

According to HAC (2015), central Appalachia's economy has relied heavily on extractive industries throughout history, especially that of coal mining. As a result, most of the nation's growth occurred due to the production of coal from the Appalachian Mountains. As stated previously, mining has produced several boom and bust economies, which severely impacted the economic well-being of many Appalachians. According to Lobao, Zhou, Partridge, and Betz (2016), "Historical boom-bust cycles for coal have been accompanied by protracted decline in its employment nationally and particularly in Appalachia. Long-term employment decline stems particularly from technological change as the industry became more capital intensive" (p. 344). Lobao et al. (2016) state that with the adoption of the Clean Air Act of 1990, as well as demand for low-sulfur coal, coal production redistributed to western states. In 1997, of the nation's coal production, 43 percent stemmed from Appalachia. However, this percentage fell to 28 percent by 2012, while western states' production increased from 41 percent to 53 percent within the same time-span. During this period, Gross U.S. coal production decreased by 7 percent, while Appalachian coal production fell by 37 percent. Today, coal mining employment has decreased significantly, with most mines either becoming automated or out of operation. According to Johnson (2017), in 2015, coal production in the United States dropped 10.3% to below 900 million short tons, which is the lowest production level since 1986. Additionally, operating mines within the United States decreased by 13% in comparison to those in 2014, falling to 853 working mines. Furthermore, Johnson (2017) states that coal production in Appalachia fell to the

lowest production levels since 1978, producing 220.7 million short tons in 2015. This is a 17.3% decline from coal production in 2014. As reported, this trend is a direct result from low coal productions in West Virginia, with 95.6 million short tons, and Kentucky, with 61.4 million short tons. In both states, a decline of 14.8% and 20.6% in coal production, respectively, was reported since 2014. Johnson (2017) also states that in 2015, within the United States, the total number of employees in coal mines decreased by 12 percent to 65,971 employees, which is the lowest average number of mine employees since data collection began in 1978. Furthermore, West Virginia and Kentucky experienced the largest employment declines, with 2,840 (15.5%) and 2,013 (17.0%), respectively.

Due to the decrease in coal mining jobs, as well as an increase in lower paying retail and service employment, Appalachia suffers from exceptionally high poverty, unemployment, low incomes, and financial assistance from the government (HAC, 2015). Additionally, central Appalachia has experienced population loss in relation to these factors. According to ARC (2018), Appalachia's unemployment rate was the lowest in northern Appalachia (5.1%), but the highest in central Appalachia (7.3%). Furthermore, 77.4% of working age adults in the U.S. report having jobs, or looking for work. In comparison, those in Appalachia fall 17.4 percentage points below the national average at 60%. The ARC (2018) examined data from 2013-2017 of Appalachia's median household income. As reported, Appalachia's median household income totals to \$47,836 per year, while U.S. household median income is \$57,652 per year. However, median household income is the lowest in central Appalachia, with \$35,862 per year reported. The ARC further reports that while Appalachia's poverty rate is decreasing overall, it has increased within central Appalachian communities since the 2008-2012 timespan. While

Appalachia's poverty rate, overall, is decreasing, the poverty rate in central Appalachia is increasing.

According to the United States Census Bureau (2018), West Virginia's poverty rate increased from 2016 – 2017, being just one of two states to experience such an increase. Consequently, West Virginia has the fourth highest poverty rate out of the nation, which is 5.7% higher than the national average. In 2017, an estimated 336,301 West Virginians out of a total population of 1,762,467 lived in poverty. Women in West Virginia face higher poverty rates than men. In 2017, West Virginia's poverty rate for women was 20.9 percent, compared with 17.2 percent for men. In the US, According to Fay (2019), those who are most impoverished include those living in female-headed households (31.2 percent), young adults without a high school diploma (31 percent), those living in a family in which the head of house is unemployed (32.9 percent), and minorities (27.6 percent for African Americans). Kannapel, Flory, Cramer, and Carr (2015) state that 90 counties within Appalachia are "distressed," with 53 of those counties located in central Appalachia alone. According to the ARC (2018), the most economically depressed counties are coined "distressed," with counties ranking between 10 percent and 25 percent of the nation. The ARC compares three areas to the national average to determine a county's level of distress, such as: the three-year average unemployment rate, per capita market income, and poverty rate.

In recent years, central Appalachia has experienced significant population loss. According to Raby (2016), 2015 U.S. census figures revealed thousands of residents having moved out of coal-rich regions in West Virginia, eastern Kentucky, and southwestern Virginia. In West Virginia, nine of the 10 counties with the most significant population loss were located

within the southern coalfields. McDowell County lost the most population, losing 2.2 percent of its residents, falling below 20,000 in population for the first time since the 1900 Census. Furthermore, Kentucky's top 10 coal producing counties lost residents, with the top producing county (Pike County) losing 1.66 percent of its population. Additionally, Harlan County experienced a 1.26 percent drop in population after an Alpha mine was idled in 2015 (Raby, 2016). According to Knollinger (2019), West Virginia is one of two states to experience significant population loss within the past ten years. In addition, West Virginia's school attendance has dropped significantly in recent years. According to Quinn (2018), West Virginia's student enrollment dropped by 4,956 students during the 2015-2016 school year, which is an increase of 1.8 percent from the prior five years. During the 2018 school year alone, enrollment in West Virginia's public-school system has decreased by 4,858 students (Johnson, 2018). As population loss continues to plague Appalachia, difficulties with educational attainment go well beyond families relocating out of state.

According to a data overview from the 2013-2017 American Community Survey provided by the Appalachian Regional Commission, or ARC (2018), 88.5% of Appalachian adults aged 25 – 64 earned a high school diploma. In comparison, the national average is 88.6%. National average for those holding a bachelor's degree falls around 32.3%, while those in Appalachia fall at 25.3%. Furthermore, when examining central Appalachia, the lowest figures are reported, with 14.6% of adults aged 25 – 64 holding bachelor's degrees. Furthermore, the ARC reports that 9.0% of U.S. adults hold associate's degrees. In comparison, the figure for Appalachian adults falls at a slightly higher percentage of 9.7%.

According to the Kannapel et al. (2015), historically, educational issues have long impacted those in Appalachia. Shaw DeYoung, and Rademacher (2004) state that the remoteness of many communities within the Appalachian region made it difficult to bring formal instruction to the area. In agreement, Kannapel et al. (2015) state that challenges within the educational system are due in part to geographic isolation, high rates of poverty, and depressed economies. However, negative views of education did not always exist within the Appalachian region. Shaw, et al. (2004) contend that education in Appalachia was highly valued, though not in the context of modern education. Until the middle of the nineteenth century, education was considered an extension of the church. Education was sought after due to morality and character training, which were objectives for teachers and the clergy. Once governmental education spread throughout Appalachia, academic rigor and content within the region was criticized by professionals. Furthermore, those in professional standing fought with parents and local trustees over the importance of educational objectives versus community concerns. According to Tang and Russ (2007), within Appalachian culture, furthering one's education for career pursuit may be perceived negatively, with the belief that individual growth should not surpass the needs of the family. Furthermore, career pursuit may be perceived as being destructive to family and community cohesion by facilitating change to the family system (Tang & Russ, 2007). According to Tyack (1974), for the aforementioned reasons, rural elementary school attendance suffered. As stated, "Educational attainment beyond the eighth grade was considered exceptional, rather than the norm, until about WWII" (Shaw, et al., 2004, p. 308).

When examining attainment of a postsecondary education, Kannapel and Flory (2017) state that students' families often lack knowledge on how to help their child pursue a college degree. Research suggests many students lack a familial role model for educational attainment,

as many parents have little to no experience with higher education (Bryan & Simmons, 2009; Hlinka, Mobelini, & Giltner, 2015; Lyttle-Burns, 2011; Snyder, 2007). However, findings suggest that parental support is more strongly associated with students pursuing a college degree than parent experience (Ali and Saunders, 2006). In recent years, research suggests that most students within Appalachia believe their parents to have favorable views toward education. Meehan, Cowley, Chadwick, Whittaker (2001) found that parents encouraged college attendance. However, some wariness still exists toward education within Appalachian culture. According to Snyder (2007), some negative views toward postsecondary education were reported, such as college being: less safe than staying at home, for the wealthy, and less profitable than manual labor. Furthermore, some rural Appalachian students reported that parents discouraged postsecondary education in favor of following in their footsteps by entering the same industry (Hendrickson, 2012).

Additionally, students within central Appalachia may be less likely to attend an out of state college. According to Kannapel and Flory (2017), career aspirations may be influenced by Appalachian students' desire to remain close to home. In agreement, Wright (2012) conducted research in which 30 students attending community college in Kentucky reported that they chose community college over a four-year degree program because of the ability to stay at home. Furthermore, findings also suggest that female students are more likely to stay close to home, pursuing degrees that will allow them to remain in the region (Hlinka et al., 2015; Wright, 2012). Kannapel and Flory (2017) found that central Appalachian students report the inclination to remain to improve and contribute to the area. Some students, however, reported wanting to leave Appalachia to find employment opportunities (Wright, 2012).

Research Questions

1. What are participants' perceptions and experiences regarding key education and Appalachian workforce variables?
2. To what extent do undergraduate students in central Appalachia report collectivistic and individualistic values on horizontal and vertical individualism and collectivism scale?
3. What are undergraduate students' attitudes toward coal and the coal industry? How do these attitudes relate to their perceptions of education; willingness to leave their home; and collectivistic and individualistic values?

CHAPTER 2

METHOD

Participants

Participants for this study included 99 undergraduate students from three college campuses within the central Appalachian region: Ashland Community and Technical College (n=28) located in Ashland, Kentucky; Marshall University (n=15) located in Huntington, West Virginia; and Marshall University Mid-Ohio Valley Center (n=56) located in Point Pleasant, West Virginia. Although five additional questionnaires were collected, the participants and resulting data were excluded from analysis as they reported being a graduate student (1) or reported non-Appalachian status (4). Of 99 participants, 38% were male respondents, while 60% were female. However, two respondents did not indicate a gender. Participant ages ranged from 18 through 53, with the median and mean age being 23.0 and 20.00 years, respectively. Furthermore, participants' marital status was as follows: Married (n=24), Single (n=66), Divorced (n=5). Additionally, four respondents did not indicate a marital status.

On the demographic survey, the majority of respondents reported having mothers and fathers with a high school diploma. Only 4% and 11% of participants maintained that their mothers or fathers, respectively, did not complete grade 12 or receive a high school diploma. According to the participants, 38% and 23% of mothers and fathers had some college experience, whereas 4% of both mothers and father were reported to have a college degree. Another 10% and 16% participated in some type of technical education.

Of all participants who reported parental breadwinner status, 63.5% (n=40) indicated that their father or stepfather provided the primary fiscal support for their family, whereas 36.5% (n=23) indicated their mother fulfilled this role. Another 21 and 9 participants self-reported that

they fulfill the breadwinner role or their spouse does so. Eighty-one specific jobs were noted by the respondents collectively. The largest proportion of reported jobs were labor positions (30%). Within this category fell those working on the railroad, in coal mines, as well as steel workers, deckhands, and mechanics, among others. The second most reported area of employment was the service industry, in which 18% of respondents were indicated. In this area, respondents reported titles such as working as a dry cleaner, bartender, and cook. Respondents also reported working at Walmart. The third highest area of employment reported was that of the medical field, in which respondents indicate titles such as pharmacist, registered nurse, State Tested Nursing Assistant (STNA), and home health aide.

Materials

Participants received the demographic questionnaire (Appendix B) and Triandis and Gelfand's (1998) revised Horizontal and Vertical Individualism scale (Appendix C) in paper formats. Additionally, researchers used five \$5.00 gift cards, as well as two boxes (Box A and Box B), in which participants returned surveys and raffle tickets to respective boxes to assure anonymity.

Demographic Questionnaire. The demographic questionnaire consisted of 21 questions in which the participant reported several factors, including age, sex, education level, marital status, as well as opinions related to education, coal production, and willingness to move.

Horizontal and Vertical Individualism and Collectivism Revised Scale. The revised version has four subscales: horizontal individualism (HI), horizontal collectivism (HC), vertical individualism (VI), and vertical collectivism (VC). Horizontal collectivism measures the extent to which an individual aims to be distinct without desiring special status. Horizontal collectivism evaluates the extent to which individuals value interdependence. Additionally, vertical

individualism determines the extent to which an individual aims to be distinct and wants special status. Lastly, vertical collectivism assesses the extent to which an individual may emphasize competition and interdependence with out-groups (Triandis & Gelfand, 1998).

Rather than giving two separate surveys, which included overlapping questions, the investigators merged the Horizontal and Vertical Individualism and Collectivism I scale and the revised version to ensure every item was represented. Moreover, the modified version adopted the Likert scale of 1-9 since the most recent version of the instrument also incorporated the same scale.

Reliability and Validity. According to Triandis and Gelfand (1998), a Likert scale of 1-9 was used for the revised scale, with a reported Cronbach's Alpha score for each individualism and collectivism scale as follows: .81(HI), .80 (HC), .82 (VI), and .73 (VC). No interrater reliability data were found.

Procedure

Participants received a packet with three components: the anonymous informed consent, demographic questionnaire, and the Horizontal and Vertical Individualism and Collectivism Revised Scale. The researchers instructed the participants to fill out the demographic questionnaire to the best of their ability. Furthermore, participants were instructed to complete the Horizontal and Vertical Individualism and Collectivism Revised scale by indicating an answer on a scale from 1-9. Completion time for each survey was estimated to be around 30-45 minutes. Administration occurred during the Fall 2018 semester at three campuses within the central Appalachian region: Ashland Community and Technical College (Ashland, KY.), Marshall University Mid-Ohio Valley Center (Point Pleasant, WV), and Marshall University

(Huntington, WV). Once completed, the participants were instructed to return the survey to Box A, then complete a raffle ticket for Box B to win a \$5.00 gas card or gift card.

Analysis

Researchers initially entered data into Microsoft Excel, then used Statistical Package for Social Sciences (SPSS) to examine data collected from each location. To analyze findings, researchers used several statistical operations, such as: simple descriptive statistics (means, standard deviations, and frequencies), cross tabs, and independent sample t-tests. Furthermore, to ensure parametric analyses were appropriate with four indices, researchers used the Kolmogorov-Smirnov Test of Normality. Here, the purpose is to ensure that data does *not* differ significantly from that which is normally distributed. Such operations were used in determining perceptions on education and workforce variables, as well as parental support, in which mean scores were compared. Additionally, researchers examined obtained mean scores on the Horizontal and Vertical Individualism and Collectivism Revised Scale in relation to the overall sample, then with gender and location. Furthermore, attitudes toward the coal industry were examined in relation to participants' willingness to move, as well as their obtained individualism and collectivism rates.

CHAPTER 3

RESULTS

Research Question 1: What are participants' perceptions and experiences regarding key education and Appalachian workforce variables?

When asked if their parents placed significant weight on the importance of continuing education past high school, the majority of participants endorsed agreement with this statement, data revealing 87.9% *strongly agreed* or *agreed*, while 11.1 percent either *strongly disagreed* or *disagreed*. Respondents similarly showed support of education when asked if entering the workforce directly out of high school is more important than going directly into some form of postsecondary university or technical college. Sixty-eight participants strongly disagreed (n=32) or disagreed (n=36) with this statement, whereas only one quarter agreed (n=26). The remaining three respondents strongly agreed with this statement. However, two students did not indicate an answer. Participants were evenly divided when asked if pursuing technical education after high school is more important than pursuing a four-year bachelor's degree. As reported, 16.2% of participants strongly disagreed, while 34.3% disagreed. Though 10.1% strongly agreed with the statement, 36.4% of respondents agreed that pursuing a technical degree is more important than pursuing a four-year bachelor's degree. Additionally, three percent did not indicate an answer.

Participants rated parental support on nine items, which ranged from preparation for higher education entrance to fiscal support while attending a postsecondary program. Participants indicated that parents were more likely to provide housing and financial support. However, parents were least likely to provide a "college fund" to pay for tuition. Further results are delineated in Table 1.

Table 1*Education support provided by parents in relation to post-secondary education.*

Parental Support	Yes (n)	No (n)
Provided housing	68	31
Provided financial support while enrolled	63	36
Provided transportation to college visits or orientation	59	40
Helped complete college applications	58	41
Prepare college applications including SAT, ACT	58	41
Provided opportunity to take dual credit courses	47	52
Finding and applying for scholarships	44	55
Provided pamphlets on educational institutions	38	61
Saved for education or college fund to pay for tuition	28	71

Three final variables measuring emotional proximity to parents and likelihood of moving away from home town and state were included in the demographic section. In examination of emotional proximity to parents, 5.1% reportedly were not very close to their parents, while 11.1% indicated being *fairly close*. However, 32.3% reported being quite close, and 51.5% reported being extremely close. Furthermore, when asked if participants were likely to move away from their hometown, the following was reported: Not sure – 8.1%, very likely – 30.3%, somewhat likely – 38.4%, and not likely – 23.2%. However, the following was reported when asked if respondents would permanently move away from their home state: Not sure – 9.1%, very likely – 16.2%, somewhat likely – 34.3%, and not likely – 40.4%. When asked to elaborate on why respondents indicated the likelihood of moving, most indicated the lack of job opportunities in the region.

Research Question 2: To what extent do undergraduate students in central Appalachia report collectivistic and individualistic values on horizontal and vertical individualism and collectivism scale?

When examined, the obtained average mean scores for the vertical collectivism and horizontal collectivism indices were 26.6 and 29.7, respectively, as outlined in Table 2. The

vertical collectivism mean score was 26.6, while vertical individualism was 22.0, with a 4.6-point difference. The horizontal individualism mean score obtained was 30.3, while the horizontal collectivism scale was 29.7. The horizontal individualism mean score obtained was .58 points higher than horizontal collectivism, meaning the two were comparable. Additional measures of central tendency and dispersion are outlined in Table 2.

Table 2

Individualism and Collectivism rates among undergraduate students in central Appalachia.

	Vertical Collectivism	Horizontal Collectivism	Vertical Individualism	Horizontal Individualism
Mean	26.55	29.72	22.04	30.31
Median	27.00	31.00	22.00	31.00
Mode	27.00	36.00	22.00	36.00
Std. Deviation	5.44	5.85	5.16	5.26
Range	32.00	32.00	28.00	32.00

Gender

When examining mean differences and gender using an independent sample t-test, the vertical individualism index was found to approach significance through slightly exceeding the .05 significance level. The average male score was 23.2, while the female obtained score was 21.2, with a 2.04 average mean difference between the two. Females obtained lower scores on all indices, except for the horizontal collectivism scale. Here, female respondents scored slightly higher, with a mean score of 30.2; while their male counterparts reported a mean score of 29.1. Additional findings in relation to gender are found in Table 3.

Table 3

Individualism and collectivism rates among male and female undergraduate students in central Appalachia.

Scale	Gender	N	Mean	Std. Deviation
Vertical Collectivism	Male	37	27.41	4.52
	Female	60	26.00	5.95
Horizontal Collectivism	Male	37	29.11	5.44
	Female	60	30.17	6.13
Vertical Individualism	Male	37	23.24	5.10
	Female	60	21.20	5.07
Horizontal Individualism	Male	37	31.16	4.15
	Female	60	29.75	5.84
Missing		2	00.00	00.00

Location

Researchers examined individualism and collectivism rates by campus location, Ashland Community and Technical College (ACTC), Marshall University Mid-Ohio Valley Center (MOVC), and Marshall University. There was a significant mean difference ($p=0.01$) between ACTC ($n=27$) and MOVC ($n=55$), with the MOVC obtaining a lower mean score on the vertical individualism scale. When comparing the MOVC and Marshall University, there was a significant mean difference ($p=0.000$) on the vertical collectivism scale. The MOVC ($M=27.15$) scored higher in the area of vertical collectivism than Marshall University ($M=21.50$). ACTC also scored higher than both the MOVC and Marshall University, with an obtained mean score of 28.33. However, overall obtained mean scores were highest on the horizontal scales for all three locations, with commensurate scores on both horizontal individualism and collectivism indices.

Research Question 3: What are undergraduate students' attitudes toward coal and the coal industry? How do these attitudes relate to their perceptions of education; willingness to leave their home; and collectivistic and individualistic values?

Coal Attitudes

Overall, when asked their attitudes toward coal and the coal industry, the majority of students responded favorably toward the coal industry. Fifty-eight participants responded with *positive* (42) and *somewhat positive* (16) ratings, whereas fifteen participants responded with negative (6) and somewhat negative (9) ratings. When asked to elaborate, respondents indicated statements, such as: “It keeps the lights on,” and “We need the jobs.” Furthermore, several participants indicated that they, or immediate family members, presently work for the coal industry. One respondent stated: “Coal has been the biggest income producer for families of Appalachia for decades, including my dad’s. As well as his father, who was an underground miner his entire life.” In comparison, of those that reported negative coal perceptions, several participants cited environmental reasons, as well as unsafe working conditions. One respondent stated unfavorable views toward the coal industry because: “They took advantage of the people in the area, treated them poorly, and poor working conditions (sic).”

Work and Education Attitudes

When participants were asked if they perceived entering the workforce directly after high school as being more important than pursuing a technical or four-year degree, sixty-eight respondents *disagreed*. When comparing this data to attitudes toward coal, 61% of those with coal-positive attitudes responded favorably toward pursuing higher education directly after high school. Of those that reported positive attitudes toward the coal industry (n=57), 39% indicated favorable attitudes toward entering the workforce rather than pursuing higher education. Two respondents did not indicate answers.

Table 4

Coal attitudes in relation to the importance of entering the work force directly out of high school versus pursuing higher education.

Workforce	Attitudes Toward Coal			Total
	Negative	Neutral	Positive	
Disagree	11	22	35	68
Agree	4	3	22	29
Total	15	25	57	97

Technical Education versus Four-Year Degree Programs

As stated previously, when participants were asked if pursuing a technical degree was more important than a bachelor's degree, respondents were evenly divided. Of those with pro-coal sentiments, 56% of respondents indicated support of four-year degree programs rather than technical education. Comparatively, 63% of those with pro-coal sentiments indicated support for pursuing a technical education. Of those that indicate negative coal attitudes, 14% favored pursuing a four-year degree program. In addition, 17% of those with anti-coal sentiments favored technical degree programs.

Table 5

Coal attitudes in relation to the importance of pursuing a technical degree versus a four-year bachelor's degree.

Technical Education	Attitudes Toward Coal			Total
	Negative	Neutral	Positive	
Disagree	7	15	28	50
Agree	8	9	29	46
Missing	0	2	1	3
Total	15	26	58	99

Willingness to Move

Of those who perceived themselves as pro-coal, a cross tab comparison indicated that 30.9% were *not likely* to move from home, while 47.7% indicated *somewhat likely* ratings. Furthermore, only 11.9% of these individuals indicated they were *very likely* to move. The remaining 9.5%

were unsure. Conversely, of those who endorsed negative attitudes (n=15) toward coal (choosing either a *negative* or *somewhat negative* rating), 66.7% indicated they were *very likely* to move away from their home town. In comparison, those indicating pro-coal attitudes and willingness to move fall at 11.0%. Additionally, of the 15 participants who reported negative attitudes toward coal, zero indicated that they were *not likely* to move. Only two indicated that they were *somewhat likely* to move away from their hometown. The remaining respondents indicated that they were not sure.

When relocating was presented as permanent, an increased number of pro-coal respondents indicated they were *not likely* to move from their home state (53.6%). Conversely, only 7% of pro-coal individuals were *very likely* to move, while 35% indicated *somewhat likely* ratings. In comparison, of those who reported anti-coal attitudes, 13.3% indicated they were *not likely* to make a permanent move. Though 33.3% of anti-coal individuals were *very likely* to move, 40% were *somewhat likely* to make a permanent move. In addition, 13.3% of respondents indicated that they were *not sure*.

Individuals attending Ashland Community and Technical College (67.9%) reported more favorable attitudes toward the coal industry than those students attending a four-year college (54.9%). Of the individuals enrolled at the community and technical college, 53.6% reported pro-coal attitudes. In comparison, 38% of those attending Marshall University, a four-year college, responded favorably. Furthermore, of those attending Ashland Community and Technical College, another 14.3% demonstrated *somewhat positive* ratings. Of the respondents attending Marshall University, 16.9% endorsed *somewhat positive* ratings. Only 10% of those attending Ashland indicated a negative perception of coal, whereas 16% of those attending Marshall University negatively endorsed coal. Furthermore, 21.4% attending the community and

technical college reported neutral attitudes, whereas 28% of those attending a four-year college indicated a neutral rating.

Collectivism versus Individualism

On the vertical collectivism scale, there was a significant difference in scores for coal-positive attitudes ($M=27.3$, $SD=5.4$) and coal-negative attitudes ($M=23.0$, $SD=4.3$); $t(70)=-2.85$, $p=0.006$. It is noteworthy to mention that both groups indicated lower mean scores on the vertical individualism score than any other scale. Individuals that reported anti-coal and pro-coal attitudes yielded commensurate mean scores on the horizontal collectivism index and the vertical individualism index, with a mean difference of .26 and .35, respectively. While the two were commensurate, it is worth noting that the overall means when comparing each index were significantly different. Both groups indicated significantly higher mean scores on the horizontal individualism scale, as well as the horizontal collectivism scale. Furthermore, the mean difference for horizontal individualism was 2.39, in which those with negative views toward coal presented with a higher horizontal individualism score. Both groups indicated lower mean scores on the vertical individualism scale than any other scale, as indicated in Table 6.

Table 6

Individualism and Collectivism rates of individuals reporting negative coal attitudes versus those with positive coal attitudes.

Index	Attitudes	N	Mean	Std. Deviation	Std. Error Mean
Vertical Collectivism	Negative	15	23.0	4.29	1.11
	Positive	57	27.33	5.45	.72
Horizontal Collectivism	Negative	15	28.93	5.84	1.51
	Positive	57	29.19	6.57	.87
Vertical Individualism	Negative	15	22.27	4.20	1.08
	Positive	57	21.91	5.14	.68
Horizontal Individualism	Negative	15	32.33	3.39	.88
	Positive	57	29.95	29.97	.79

CHAPTER 4

DISCUSSION

This study focused on central Appalachia and the attributes of collectivism within its culture. Isolation, poverty, and views on coal and education were also examined as determining factors of the culture.

Three college campuses within the central Appalachian region were selected as areas of interest for this study. First, Ashland Community and Technical College in a rural area of Ashland, KY was chosen to represent those pursuing technical, or two-year, degrees. Secondly, the Marshall University Mid-Ohio Valley Center in Point Pleasant, WV was chosen as it is a satellite campus for Marshall University, and is also located in a rural area. Here, students participate in a four-year degree program. In addition, Marshall University's campus was selected to garner a view of those typically considered traditional students, as well as those within a more urban area of Appalachia. Participants willingly participated in the anonymous study, receiving a demographic survey, as well as Triandis and Gelfand's (1998) Horizontal and Vertical Individualism and Collectivism Revised Scale. For participating in the study, participants were entered into a drawing to win a \$5.00 gift card. A total of 99 students from all campuses participated in the study.

As views toward education have historically been found to be negative within Appalachia, perceptions gained from this study display more favorable attitudes within the sample size. When examining participants' perceptions and experiences in education and workforce, the majority of participants indicated that their parents placed significant weight on continuing education after high school. Participants also indicated favorable attitudes toward post-secondary education versus directly entering the workforce. It is important to note,

however, that the sample size obtained were those already attending a postsecondary institution. As stated previously, those within Appalachia earn their high school diploma at the same rate as those in the nation. However, rates of obtaining a bachelor's degree are considerably lower, especially within central Appalachia, when compared to the US (ARC, 2018). Respondents indicated several areas in which families provided support for higher education. The most reported support that participants indicated receiving from parents was housing, which may coincide with findings that point toward a collectivistic culture. Families tend to stay in close proximity to one another, and may live in a multi-generational household, as is often found in collectivistic cultures and those living in Appalachia (Carteret, 2010). Families were also found to offer fiscal support, as well as transportation, while students were in college. The majority of respondents indicated that their mother, father, or stepfather were the primary breadwinners for their household. However, respondents indicated that parents were least likely to provide a college fund. According to Sallie Mae (2018), 56% of parents in the US have started saving for a college fund. Further data provided by Sallie Mae showed that families with higher income (more than \$100,000 per year) reported, on average, having saved more than seven times as much money than those in lower income (less than \$35,000 per year) households. As reported by the ARC (2018), those in central Appalachia report median household incomes of \$35,862 per year. Unsurprisingly, poverty within the Appalachian region seemingly accounts for parents' ability, or lack thereof, to save for a college fund.

When determining horizontal and vertical individualism and collectivism, researchers compared obtained mean scores in each area in relation to the overall sample, gender, and location. Researchers also examined rates of individualism and collectivism in relation to participants' attitudes toward coal and education, as well as their willingness to move. Overall,

respondents scored higher on both the horizontal individualism and collectivism scales, with commensurate scores between the two. Hofstede (1980), though, presented individualism and collectivism as a bipolar construct, in which a culture presents as one or the other. Since participants report commensurate scores on horizontal individualism and collectivism, findings suggest that the horizontal representation is of importance rather than simply individualism or collectivism. Rather than individualism and collectivism lying at opposite ends of a construct, in which a culture is one or the other, findings suggest it may lie on a continuum. However, it is important to note that the definition of collectivism, as defined by Merriam-Webster (2019), is: “Emphasis on collective rather than individual action or identity (p.1).” When comparing horizontal and vertical presentations, the horizontal construct values the group over one’s self, which coincides with the overall definition of collectivism. Is it when we start to delineate between the four representations that we find a continuum? Horizontal individualism and collectivism share characteristics in which they believe everyone to be of the same status. Hierarchy is not favored. While the US is considered to a vertical individualistic culture, the current study suggests that those within Appalachia are representative of those in Sweden, Denmark, and Australia (horizontal individualism). Furthermore, participants also reported values consistent with those of East Asia, India, and Eastern European cultures (horizontal collectivism). Participants within this study reported the lowest mean scores in the area of vertical individualism (Noordin, 2009; Shavitt et al., 2011).

When examining the sample in relation to gender differences, both males and females report higher scores on the horizontal scales in comparison to the vertical scales. However, females obtained a higher mean score on the horizontal collectivism index than that of their male counterparts. Interestingly, the horizontal collectivism scale is the only area in which females

scored higher than males, with a 1.06 mean score difference. Females may be more likely to consider themselves the same as others within their group, believing in equality but less freedom. Females may favor interdependence, and socializing with their in-group more than their male counterparts (Triandis, 1995; Noordin, 2009; Shavitt et al., 2011; Triandis & Gelfand, 1998). Males also scored higher on the horizontal indices, but when comparing horizontal collectivism and individualism, males obtained a mean score 2.05 points higher on the latter index. This may indicate that males may perceive themselves as autonomous, while still identifying the same as group members. Hierarchical status is not important, as each person within the culture is considered equal (Shavitt et al., 2011; Noordin, 2009). As Russ (2010) argues, those in Appalachia are patriarchal, in which the females are found to be subservient to the males, as well as the nurturer and caregiver for the family. Males, however, are perceived to be the breadwinners, relying on one's self to provide for the family. Findings in this study may point to such beliefs holding true.

Attitudes toward coal were examined in relation to participants' willingness to move, as well as their ratings of horizontal and vertical collectivism and individualism. The majority of participants indicated positive views toward the coal industry, stating that coal jobs were important for the area. Furthermore, willingness to move was examined in relation to coal attitudes. Overall, those with positive attitudes toward coal reported that they were less likely to move than those with negative attitudes toward the coal industry. When asked to elaborate on their reasoning for staying near home, most participants stated they wanted to stay close to their family. Researchers also asked participants to rate their emotional proximity to their parents, which is important to note in this area. Of respondents, 83.8% indicated being either extremely

close or quite close to their parents. As such, findings may indicate collectivistic culture, one that values their in-group and familial ties.

Researchers also examined individualism and collectivism rates by location, or campus: ACTC in Ashland, KY; MOVC in Point Pleasant, WV; and Marshall University in Huntington, WV. When examining location, all campuses reported higher scores on the horizontal indices than the vertical. However, on the vertical collectivism scale, Ashland and Point Pleasant both obtained mean scores significantly higher than that of the Huntington campus. As such, those attending the more rural locations may see themselves as part of a group in which each member holds a different status, in likeness of East Asia, India, and Eastern Europe. Those within this culture may readily submit to authority, as well as value the group despite one's own needs. To determine reasoning on such a discrepancy between campuses, researchers examined age, in which ACTC's mean age was 26, while the MOVC and Marshall University's mean ages were 22 and 21, respectively. Median age ranges for ACTC fall between 18 and 42, while the MOVC age ranges are between 18 and 53. Marshall University's age ranges fall between 19 and 27. Both rural locations encompass a wider age range. The wider age ranges may account for the discrepancy with the rural locations having higher vertical collectivism rates, as there is a more non-traditional sample than those at Marshall University. Furthermore, the more rural location, in itself, may contribute to the mean differences.

When examining location and attitudes toward coal, those attending Ashland Community and Technical College reported more favorable attitudes than those attending a four-year degree program. Only 10% of those pursuing a technical degree reported negative views toward the coal industry. Researchers believed it important to garner a view of participants' coal attitudes to examine career implications within Appalachia. Respondents with both positive and negative

views toward the coal industry indicated higher mean scores on the horizontal individualism and collectivism scales. However, individuals that present with negative views toward coal indicate a higher rate of horizontal individualism (M=32.33) than their coal-positive (M=29.95) counterparts. While both groups present as horizontal, those with negative attitudes toward coal are more individualistic, with a mean score difference of 2.39 points. Here, anti-coal respondents report being more independent, while also valuing their in-group status, mirroring those in countries like Sweden, Denmark, and Australia. The researchers also note comparisons between horizontal individualism and horizontal collectivism among coal-positive respondents, in which respondents indicate a .75 mean score difference. Here, coal-positive respondents score slightly higher on the horizontal individualism index, but scores on the horizontal collectivism index are commensurate. As such, pro-coal respondents indicate comparable scores in individualism and collectivism, but present horizontally. Continually, participants reported commensurate scores on both horizontal individualism and collectivism indices in all areas.

Limitations

Researchers noted several limitations for the current study. Current research used a convenient sample, which is problematic, as respondents were those attending postsecondary institutions. Secondly, many students in the study were considered non-traditional as they were older students who returned to college later in life. The extent to which their views would align with the views of a sample of traditional college age students only is unknown. Furthermore, the sample size obtained included a larger female (60%) representation than male (38%). As such, the sample size was not representative of the general population, in which studying an even representation of males and females outside of postsecondary institutions would be beneficial within Appalachia. Additionally, researchers asked participants how many generations of family

had lived in Appalachia. The variable was excluded, however, due to misunderstanding of participants' responses. Another limitation arose in which researchers set out to examine parental income in relation to collectivism rates. However, the question was believed to be flawed due to high variability in answers and improbable values.

Future Research

Future research would be beneficial, as researchers believe it important to gain a broader view of collectivism within Appalachia among the general population. A sample size representing the same amount of male versus female respondents would be ideal. As Bergmuller (2013) stated, collectivism rates tend to be higher among those with increased rates of poverty. Research examining individualism and collectivism in relation to individuals' income and education level is warranted. Analyzing those with a long family history in Appalachia in comparison to those that do not report generations of Appalachian lineage would also be beneficial for future research. Here, researchers would gain a better view of how generational Appalachians report attitudes toward education, willingness to move, and coal in relation to deep seeded cultural beliefs within Appalachia. Furthermore, as individualism and collectivism was previously believed to be a bipolar construct, findings may point to a continuum rather than two distinct categories. Further research delving into horizontal and vertical representations of individualism and collectivism could deepen understanding of cultural views. An additional issue in relation to collectivism would be that of internet access. With internet access, exposure to other cultures, societies, politics, and economic activity is greatly increased (Strover, 2018). Strover continues to state that 39 percent of rural Americans lack home broadband access, while only four percent of urban Americans lack access. As such, those in Appalachia may not participate with the outside world as much as those in urban areas. Research among

Appalachians with and without proper internet access would allow for a better view of how Appalachia's culture is possibly changing. Updated studies determining individualism and collectivism rates within the US as a whole would be advantageous for a comparison group. Furthermore, examination of attitudes towards coal throughout the US would be beneficial to determine whether Appalachia holds on to those views more so than the rest of the country.

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APPENDIX A

OFFICE OF RESEARCH INTEGRITY APPROVAL LETTER



Office of Research Integrity
Institutional Review Board
One John Marshall Drive
Huntington, WV 25755

FWA 00002704

IRB1 #00002205
IRB2 #00003206

August 23, 2018

Lanai Jennings, PhD
School Psychology, MUGC

RE: IRBNet ID# 1128054-1

At: Marshall University Institutional Review Board #2 (Social/Behavioral)

Dear Dr. Jennings:

Protocol Title: [1128054-1] Collectivism in Central Appalachia

Site Location: MUGC

Submission Type: New Project APPROVED

Review Type: Exempt Review

In accordance with 45CFR46.101(b)(2), the above study was granted Exempted approval today by the Marshall University Institutional Review Board #2 (Social/Behavioral) Designee. No further submission (or closure) is required for an Exempt study **unless** there is an amendment to the study. All amendments (including the addition of research staff) must be submitted and approved by the IRB Chair/Designee.

This study is for student Heidi Creamer.

If you have any questions, please contact the Marshall University Institutional Review Board #2 (Social/Behavioral) Coordinator Bruce Day, ThD, CIP at 304-696-4303 or day50@marshall.edu. Please include your study title and reference number in all correspondence with this office.

APPENDIX B

Demographic Questionnaire

1. Gender: Male Female

2. Age:

3. Campus (e.g., Marshall University, ACTC, MOVC, etc.):

4. Major/Area of Study:

5. Freshman Sophomore Junior Senior

6. Hometown/State:

7. Mother's Highest Education level:

 High School: 9 10 11 12 (grade level)

 High School Diploma

 Technical/Vocational

 Some College

 College degree

 Other: _____

8. Father's Highest Education level:

 High School: 9 10 11 12 (grade level)

 High School Diploma

 Technical/Vocational

 Some College

 College degree

 Other: _____

9. Household Income:

>\$10,000

\$11,000 - \$20,000

\$21,000 - \$30,000

\$31,000 - \$45,000

\$46,000 - \$60,000

\$61,000 - \$80,000

<\$81,000

Other: _____

10. Who is considered the “bread winner,” or the sole provider, within your immediate family (i.e., self, mother, father, grandfather, or others living in the same household)?

a. _____

b. What is your/their Occupation: _____

Number of years at job: _____

Number of generations in your family that share the same occupation:

11. Marital status:

Married

Single

Divorced

12. To your knowledge, how many generations of your family have lived in Appalachia?

0

1

2

3

4

5

6

7

8+

Rate your level of agreement with the following statements:

13. Entering the workforce directly out of high school is more important than directly entering into university, community/technical college, etc.

Disagree Somewhat Disagree Somewhat Agree Agree

14. Pursuing a technical education (electrical work, welding, etc.) after high school is more important than pursuing a 4-year Bachelor degree?

Disagree Somewhat Disagree Somewhat Agree Agree

15. My parents or guardian placed significant weight on the importance of continuing education past high school.

Disagree Somewhat Disagree Somewhat Agree Agree

16. How close do you feel to your parents?

Not Very Close Fairly Close Quite Close Extremely Close

17. What was your high school GPA? _____

18. What types of support did your parents/guardians provide to help you pursue a higher education after high school? Please check all that apply.

_____ Helped student prepare for college applications, by researching/providing information on application process and needs, such as testing requirements (ACT, SAT), grade requirements, etc.

_____ Provided opportunity for student to take dual credit, or college courses, while in high school.

_____ Provided pamphlets, or helped gather information on possible higher education institutions

_____ Helped with college applications (started application process, gathered paperwork, proofread applications, etc.)

_____ Helped with finding and applying for scholarships

_____ Saved for child's education, or had a "college fund," to help pay for tuition costs, etc.

_____ Provided transportation to college visitations/orientation

_____ Financial support while pursuing a higher education (help with bills, gas, food, etc.)

_____ Provided housing while pursuing a higher education (lived at home, parents paid rent if lived off campus, paid dorm rates, etc.)

19. What are your attitudes toward coal and the coal industry?

Negative Somewhat Negative Neutral Somewhat Positive Positive

a. Explain: _____

20. How likely are you to move out of your hometown (away from family, friends, support system)?

Not Likely Somewhat Likely Very Likely Not Sure

Please explain why or why not:

21. How likely are you to permanently move away from your home state?

Not Likely

Somewhat Likely

Very Likely

Not Sure

a. Please explain why or why not:

APPENDIX C

Horizontal and Vertical Individualism and Collectivism Scale Revised (Triandis and Gelfand, 1998)

Horizontal Individualism

1. I'd rather depend on myself than others
2. I rely on myself most of the time, I rarely rely on others
3. I often do my own thing
4. My personal identity, independent of others, is very important to me

Vertical Individualism

1. It is important for me to do my job better than the others
2. Winning is everything
3. Competition is the law of nature
4. When another person does better than I do, I get tense and aroused

Horizontal Collectivism

1. If a co-worker gets a prize, I would feel proud
2. The well-being of my coworkers is important to me
3. To me, pleasure is spending time with others
4. I feel good when I cooperate with others

Vertical Collectivism

1. Parents and children must stay together as much as possible
2. It is my duty to take care of my family, even when I have to sacrifice what I want
3. Family members should stick together, no matter what sacrifices are required
4. It is important to me that I respect the decision made by my groups

Scale 1-9; Cronbach's α : .81 (HI), .82 (VI), .80(HC), .73(VC); test-retest: not available; loadings .40 to .68