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Profiling the Youth Leader: Personality and Emotional Intelligence Trends and Their Relationship to Leadership Skills

L.J. McElravy¹ and Lindsay J. Hastings²

Abstract

The transfer of leadership to younger generations is an important factor in agricultural communities and is likely one reason developing leaders is a central mission of many youth organizations, including 4-H and FFA. In adults, researchers have extensively explored the relationship between personality traits and leadership (Judge, Bono, Ilies, & Gerhardt, 2002), but a clear profile of youth leaders has not been developed. This profile could help in planning for and developing the next generation of community leaders. In this study, we explored the relationship between traits, including the Big-Five model of personality and emotional intelligence, and self-perceived leadership skills in youth participating in summer leadership conferences. Emotional intelligence and age predicted the youths' self-perceived leadership skills. The potential need for youth leadership development programming to include, and perhaps even focus on, emotional intelligence is outlined.

Keywords: youth leaders; youth leadership development; trait leadership; personality; emotional intelligence

The United States is poised to experience a predicted \$75 trillion transfer of wealth opportunity from older generations (Civic and Baby Boomers) to younger generations (Generation X, Generation Y, and Millennial) between 2010 and 2060 (Macke, Markley, & Binerer, 2011). Furthermore, the largest generation in this country, the Baby Boomers, are currently between the ages of 48 and 66 and are entering the red zone for retirement (U.S. Census Bureau, 2010). These individuals are currently occupying the vast majority of leadership positions within business and industry as well as the not-for-profit sector. Currently, employed individuals aged 45 and over hold approximately 56 percent of all management occupations in the United States (U.S. Bureau of Labor Statistics, 2012). This statistic indicates that over half of all management occupations will be transferred to a younger generation within the next two decades. Furthermore, the second highest median age (55.9) in management occupations is in the farming, ranching, and agricultural management sector. Therefore, this transfer of wealth issue is not just a wealth issue, but also a transfer of leadership issue, especially in the agricultural industry. The need to prepare youth leaders for the future is well-recognized in many communities; in a recent Midwestern rural poll, 61% of respondents listed "training young residents in the community for leadership roles" as very important (Center for Applied Rural Innovation, 2012, p. II-III).

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So how will this next generation of leaders embrace this transfer? How might the next generation of leaders *contribute* to this transfer of leadership rather than just *consume* this transfer of wealth? It is naïve to assume that the upcoming generation of young leaders will have the same trait-leadership associations as older generations of leaders. The field of leadership would be prudent to study the “profile” of the youth leader so as to more accurately predict and plan for the leadership landscape in the coming decades.

The purpose of this study was to explore the relationship between traits, including the Big-Five model of personality and emotional intelligence, and self-perceived leadership skills in youth participating in summer leadership conferences. This study utilized a trait leadership theoretical model (for a review, see Northouse, 2012) to answer the question, what traits are associated with leadership skills in youth? Two trait-based constructs that have been measured and validated within youth populations are personality traits and trait-based emotional intelligence. Since these constructs have been widely studied among leadership scholars, we narrowed-in on these factors for study.

Theoretical Framework

Trait leadership examines innate personality traits and their relationship to leadership, postulating that some traits are indeed common among effective leaders (Yukl, 2006). Emotional intelligence (EI) is broadly defined as “the set of abilities (verbal and non-verbal) that enable a person to generate, recognize, express, understand, and evaluate their own and others’ emotions in order to guide thinking and action that successfully cope with environmental demands and pressures” (Van Rooy & Viswesvaran, 2004, p. 72). EI serves as an important construct for understanding how individuals can marshal their emotions and the emotions of others to effectively interact and influence in a myriad of social settings, including work settings. Emotional intelligence scholars distinguish between trait and ability-based constructs. Petrides and Furnham (2001) articulated the difference between trait and ability-based EI models: “the former encompasses behavioural [sic] dispositions and self-perceived abilities and is measured through self-report, whereas the latter concerns actual abilities and ought to be measured with maximum-performance rather than self-report tests” (p. 426). Given the current study’s focus on the relationship between traits and leadership, the trait emotional intelligence model is used.

Youth Leadership Life Skills Development

Several studies have documented a relationship between participation in youth leadership activities (programs such as 4-H and FFA) and self-perceived leadership skills as measured by the Youth Leadership Life Skills Development Scale (YLLSDS). The number of 4-H leadership activities senior youth participated in positively predicted 12.6% of the variance in YLLSDS scores (SeEVERS & Dormody, 1994). Participation in FFA leadership activities also positively predicted 2.3% of the variance in YLLSDS scores (Dormody & SeEVERS, 1994). Duncan (2000) reported a 0.27 correlation ($p < 0.05$) between the number of years participating in 4-H camp and YLLSDS scores in West Virginia. Also, serving as a 4-H Ambassador, gender, and district predicted YLLSDS scores in youth from Montana (Flynn, Igo, & Frick, 2009).

The “Profile” of Adult Leaders versus Youth Leaders: Personality

Several studies have examined personality types among youth leaders using the Myers Briggs Type Indicator (MBTI; Darst, 1998; Owings & Nelson, 1979; Wingenbach, 2000). The MBTI measure is designed to indicate a person’s preference on each of four basic personality traits: (a) extroversion or introversion, (b) sensing or intuition, (c) thinking or feeling, and (d) judging or perceiving (Jung, 1971). Owings and Nelson (1979) administered the MBTI to 147

FFA chapter and state officers who attended a national summer leadership conference in 1976. Frequency and cross-tab analysis indicated that the sampled FFA officers demonstrated higher levels of extroversion (72.1%), sensing (68.0%), feeling (62.6%), and judging (59.9%). Darst (1998) examined the personality type of 149 college student leaders. Chi square analysis revealed a preferred type of thinking and judging among the student leaders sampled. Wingenbach (2000) examined personality types among 215 college students enrolled in a leadership course. Correlational analyses revealed a significant, positive, low association between the final grade assigned in the leadership course and the sensing and judging personality preferences. Although the MBTI is often used for training (Luthans, 2011), after reviewing MBTI research, Gardner and Martinko (1996) concluded that “many findings are suspect because they are inconsistent across studies and/or weak” (Gardner & Martinko, 1996).

Another popular model of personality, the five-factor model, was reported to be related to the MBTI (Furnham, Moutafi, & Crump, 2003), but has also been extensively researched in the field of applied psychology (e.g. Judge, Heller, & Mount, 2002; Judge & Ilies, 2002). John, Naumann, and Soto (2008) reviewed the five-factors of personality and provided conceptual definitions for each of the factors: neuroticism, extraversion, openness, agreeableness, and conscientiousness. Individuals scoring high on the neuroticism factor likely feel tense, anxious, and nervous more than others. The extraversion factor measures the degree to which a person takes an energetic approach to working with others. Openness describes individuals’ interest in learning and having novel experiences. The agreeableness factor describes a person’s orientation toward having a communal orientation. Conscientiousness describes the degree to which people have socially prescribed impulse control and a tendency to delay gratification.

Relative to trait leadership, Judge, Bono, Ilies, and Gerhardt (2002) conducted a comprehensive review of quantitative research that examined the relationship between personality traits and leadership. Using the five-factor model of personality and two leadership criteria (leadership emergence and leader effectiveness), the results of their meta-analysis revealed a statistically significant multiple correlation of .48 between personality and leadership. Extraversion demonstrated the highest and most consistent significant correlation with leadership, even after controlling for other personality factors. Conscientiousness and openness to experience were the next strongest significant correlates of leadership, with conscientiousness proving to be the strongest predictor of leadership in the multivariate analysis.

Among student populations, Judge et al. (2002) reported statistically significant correlations between each personality factor and varying leadership criteria (Neuroticism -.27, Extraversion .40, Openness to Experience .28, Agreeableness .18, Conscientiousness .36) at the 95% confidence interval. Personality and leadership studies among student populations included in Judge et al.’s meta-analysis ranged from assessing the personality of student leaders (in comparison to non-leaders; e.g. Flemming, 1935; George & Abraham, 1966; Hunter & Jordan, 1939; Karnes & McGinnis, 1996; Kureshi & Fatima, 1984; McCullough, Ashbridge, & Pegg, 1994; Sinha & Kumar, 1966) to investigating adult-determined leadership characteristics in children (e.g. Landau & Weissler, 1990) to more traditional examinations of the relationship between personality traits and leadership skills (e.g. Karnes & D’Ilio, 1990). The reader should note the vast age differences among the student populations studied (ranging from elementary-age to college-age students), the vast array of years these studies span (ranging from the 1930s to the late 1990s), as well as the inconsistent measure of leadership as a dependent variable.

In response to the personality and leadership meta-analysis conducted by Judge et al. (2002), the following five hypotheses were developed for the current study, predicting the relationship between personality factors and self-perceived leadership skills.

Hypothesis 1a: Neuroticism will be negatively related to self-perceived leadership in youth.

Hypothesis 1b: Extraversion will be positively related to self-perceived leadership in youth.

Hypothesis 1c: Openness to experience will be positively related to self-perceived leadership in youth.

Hypothesis 1d: Agreeableness will be positively related to self-perceived leadership in youth.

Hypothesis 1e: Conscientiousness will be positively related to self-perceived leadership in youth.

The “Profile” of Adult Leaders versus Youth Leaders: Emotional Intelligence

With regard to emotional intelligence (EI), several adult studies utilizing both trait- and ability-based EI measures reported significant relationships between EI and important organizational outcomes. Higher EI scores have been significantly related to lower levels of workplace stress and higher levels of perceived job control, satisfaction, and commitment (Petrides & Furnham, 2006; Quoidbach & Hansenne, 2009; Rosete & Ciarrochi, 2005; Sy & O’Hara, 2006).

Moore and Rudd (2004, 2005) examined emotional intelligence among adult Extension leaders. In their 2004 study, Moore and Rudd conducted telephone interviews with a purposive sample of 11 administrators within the National Association of State Universities and Land-grant Colleges. Qualitative analysis revealed emotional intelligence as one of six major leadership skill areas needed by Extension leaders. Moore and Rudd (2005) then assessed the importance of and level of proficiency in the aforementioned six leadership skill areas among 49 Extension leaders. Participants perceived emotional intelligence to be the most important leadership skill area for Extension leaders and self-evaluated their level of proficiency in emotional intelligence higher than any other leadership skill area.

Among student populations, several studies revealed a positive and predictive relationship between EI and socioemotional outcomes as well as positive behavior. Frederickson, Petrides and Simmonds (2012), for example, examined predictive and incremental validity of trait EI among 1140 preteen students (ages 11- 13) in Southeast England. Structural equation modeling revealed significant trait EI effects on socioemotional competence, and hierarchical regression analyses revealed trait EI as a significant predictor of socioemotional competence. Among 160 sixth-year primary students in London, correlational analyses revealed a significant relationship between trait EI and cooperation (.29), disruption (-.20), and dependence (-.35; Petrides, Sangareau, Furnham, & Frederickson, 2006). Furthermore, follow-up ANOVAs to a significant multivariate main effect indicated that students with high trait EI demonstrated significantly higher teacher nominations for cooperation and significantly fewer nominations for aggression and dependence than students with low trait EI (Petrides et al., 2006). Correlational analysis from Mavroveli, Petrides, Shove, and Whitehead’s (2008) study of 139 seventh-year students from Southeast England yielded similar results by revealing a significant positive correlation between trait EI and teacher-rated positive behavior and a significant negative correlation with teacher-rated negative behavior.

Given the above documented relationships between emotional intelligence and leadership in adults and the relationship between emotional intelligence and positive behaviors in youth, the current study tested the following additional hypothesis:

Hypothesis 2: EI will be positively related to self-perceived leadership skills in youth.

Methods

Population

The current study aimed to determine the relationship between traits and leadership skills in this generation of youth leaders. Two groups of students participating in leadership development training were targeted as the authors felt they could provide insight into the trait-leadership skill relationship because of their identification as leaders. The leadership training occurred over the summer and was conducted in Nebraska with two groups of youth.

The first group (n=74) was comprised of incoming sixth graders who participated in a week-long, three-hour per-day leadership training program in the summer of 2012. Each public

and private school in a local district nominated five students who demonstrated exceptional leadership potential to participate in the leadership training program.

The second group of youth (n=83) was comprised of sixth- through twelfth-grade students who participated in one of two three-day leadership training conferences in the summer of 2012. Students in this group self-selected to attend, and the organizers of the training targeted youth participating in 4-H and career student associations, such as FFA, FBLA, FCCLA, DECA, SkillsUSA, and HOSA. These organizations focus on leadership and professional skill development in high school-aged youth. Demographic data for both groups are reported in the results section.

Based on a power analysis conducted using an a-priori sample size calculator for multiple regression (Soper, 2013), to detect a medium effect size of 0.20, with 10 predictors, at a 0.05 probability level, at a statistical power level of 0.80, a sample size of 91 would be required. Thus, the two sample groups were combined.

Procedure

For both groups, the researchers sent consent forms to the parents of the participants and to the participants themselves before their respective training sessions began. Parents and participants brought the consent forms to the first day of their respective trainings, and the forms were also made available at the training registration. Upon arrival, each participant was given the opportunity to participate in the research by completing a paper and pencil survey packet which included the Youth Leadership Life Skills Development scale (YLLSDS), the Trait Emotional Intelligence Questionnaire – Adolescent Short Form (TEIQ-ASF), the Big Five Inventory – Youth Form (BFI), and demographic questionnaires. Students voluntarily completed the survey packets on-site and submitted packets to the researchers upon completion. Participants completed the surveys in approximately 30 to 40 minutes. Since this research included minors, appropriate Institutional Review Board approval was obtained.

Scales Used

Emotional intelligence. Although emotional intelligence (EI) became a very popular topic in psychology and organizational behavior, the measurement of EI has been an area of controversy (Spector, 2005). EI is measured using ability-based ratings (Mayer & Salovey, 1997; Mayer, Salovey, & Caruso, 2004) and self-report scales (Bar-On, 1997, Goleman, 1995; Schutte et al., 1998). The classification of EI models has also been a point of debate. Mayer, Salovey, and Caruso (2000) put forth an ability versus mixed model (combination of other factors, i.e. ability, motivation, and states of consciousness) differentiation. In contrast to this classification, Petrides and Furnham (2000) argued for a distinction between trait models and ability models, making clear that trait-based EI should be measured using self-report scales.

Although this debate is still active (Mayer, Roberts, Barsade, 2008), the ability versus trait classification has been supported by further research (O'Connor & Little, 2003) and was the distinction used in a meta-analysis exploring the relationship between EI and transformational/transactional leadership (Harms & Credé, 2010).

The research linking EI and leadership in adults have reported both significant relationships (Palmer, Walls, Burgess, & Stough; 2001) and non-significant relationship (Barbuto & Burbach, 2006; Brown, Bryant, & Reilly, 2006). However, the meta-analysis conducted by Harms and Credé (2010) elucidated the relationship between EI and transformational-transactional leadership. Key points from this study are that the effect size between self-reported EI and secondary source ratings for leadership are lower than when both EI and leadership are self-reported. Furthermore, the effect size between leadership ratings and EI are higher when trait-based measures of EI are used.

Given the low relationship between ability-based measures of EI and leadership (Harms & Credé, 2010), and the availability of a free trait-based measure of EI (Petrides, 2009a) that has been reported as having sound psychometric properties in several different populations (Mikolajczak, Luminet, Leroy, & Roy, 2007; Pérez, Petrides, & Furnham, 2005; Petrides, 2009b), including adolescents as young as 10 years old ($\alpha = 0.84$; Petrides, Sangereau, Furnham, & Frederickson, 2006), the Trait Emotional Intelligence Questionnaire – Adolescent Short Form (TEIQue-ASF) was used in this study. The TEIQue-ASF is a 30-item measure of global trait EI. Sample items include “It’s easy for me to talk about my feelings to other people” and “I find it hard to know exactly what emotion I’m feeling.” The scale is available from <http://www.psychometriclab.com/>. Participants rate their agreement with the statements on a scale from 1 (disagree completely) to 7 (agree completely), and a total sum score ranging from 30 to 210 is used for analysis.

Personality. The Big Five Inventory (BFI; John, Naumann, & Soto, 2008; John, Donahue, & Kentle, 1991; Benet-Martinez & John, 1998) is a personality assessment measuring the five-factor model of personality: neuroticism, conscientiousness, openness to experience, agreeableness, and extraversion. The scale consists of 44 short, easy-to-understand items. Participants rate their agreement with each statement on a 5-point scale, from 1 (disagree completely) to 5 (agree completely). Table 1 presents example items from the five factors. An

Table 1

The BFI Factors and Example Items

BFI Factors	Example items
Extraversion	Generates a lot of enthusiasm. Tends to be quiet (R).
Agreeableness	Is generally trusting. Is sometimes rude to others (R).
Conscientiousness	Tends to be disorganized (R). Keeps working until things are done.
Neuroticism	Is relaxed, handles stress well (R). Worries a lot.
Openness	Likes work that in the same every time (R). Likes to think and play with ideas.

Note. Average factor score ranging from 1 to 5 is used for data analysis.

Using confirmatory factor analysis (CFA), John, Naumann, and Soto (2008) reported that the five factor measure of the BFI was highly convergent with the most common measures of personality, the NEO Five-Factor Inventory (NEO-FFI; Costa & McCrae, 1992) and Goldberg’s Trait Descriptive Adjectives (TDA; Goldberg, 1992; Saucier, 1994). They reported mean standardized convergent validity coefficients of 0.95 for the BFI and TDA and 0.93 for the BFI and NEO-FFI. The BFI is written at a fifth-grade reading level (Benet-Martinez & John, 1998), and strong internal consistency has been reported with samples as young as 10 years old (Soto, John, Gosling, & Potter, 2008, 2011).

Thus, we used the BFI because of the age of our sample population, the reported convergent validity with the most researched measures of personality, and the approximate survey completion time of 15 minutes. The BFI is available from the Berkley Personality Lab (<http://www.ocf.berkeley.edu/~johnlab/index.htm>).

Note. Reverse-keyed items are denoted by (R). The common stem for all BFI items is “I see myself as someone who . . .” BFI = Big Five Inventory.

Demographics. When conducting leadership research with youth, Van Linden and Fertman (1998) recommended that researchers control for three important factors: (a) gender, (b) socio-economic status, and (c) race and ethnicity. Gender, race, and ethnicity were collected using single response items. We also controlled for age.

To collect information on socio-economic status (SES), we used the Barratt Simplified Measure of Socio-Economic Status (Barratt, 2012), which is based on the work of Hollingshead (1957, 1975). Respondents designate the level of education of both of their parents on a 7-point scale, from “Less than 7th Grade” to “Graduate Degree.” Respondents also designate the occupation of their parents. Occupations are broken into nine groups. Examples of occupations in group one are “day laborer and busboy,” whereas examples of occupations in group nine are “physician and accountant.” The average of the parental education and occupation scale are combined to create a rating of SES ranging from two to 16. The variable can be treated as a continuous variable in regression analysis (Barratt, 2012).

Youth Leadership Life Skills Development Scale (YLLSDS). The YLLSDS was developed to reliably measure youth leadership skill development (Seevers, Dormody, & Clason, 1995). The scale has been used with youth as young as 12 years old (Seevers & Dormody, 1994). Sample items from the YLLSDS include, “Can listen effectively” and “Trust other people,” and respondents list the degree to which they possess each skill, from 0 (none) to 3 (high). Using different samples, Seevers et al. (1995) and Smith, Genry, and Ketring (2005) reported strong internal consistency with the YLLSDs (Cronbach $\alpha=0.98$ and 0.93 respectively). The 30-items are summed to create a total score ranging from 0 to 90.

To ensure that all participants would understand the scale, we asked eight students entering the seventh grade to read the scale and circle any words they did not understand or any words they thought someone entering the sixth grade might not understand. We encouraged the students to circle any words they were not sure they knew. In total, 13 words were identified, and a list of definitions was provided with the YLLSDS to all participants.

Analysis. To test whether the BFI and EI predicted a significant amount of variance in YLLSDS scores while controlling for age, gender, race/ethnicity, and SES, we conducted a multiple regression analysis using the GLM and GLMSELECT procedure within SAS 9.3.

Results

Of the 157 conference participants, 115 (73% response rate) consented and fully completed the surveys. The age ranged from 10 to 17 (mean=13.02). The final sample included 74 girls (64%). The racial/ethnic breakdown of the final youth sample is as follows: 105 white (91%), one American Indian/Alaskan native (1%), three Asian or Pacific Islander (3%), two Hispanic, Latino, or Spanish origin (2%), and four other (3%).

The means, standard deviations, and Cronbach alpha reliabilities are reported in Table 2. Cronbach alpha reliabilities for all scales are 0.73 or above. Our sample reported higher YLLSDS scores (mean=73.4) compared to other studies (mean=64.2; mean=61.4, respectively) (Dormody & Seevers, 1994; Duncan, 2000). Also, our sample reported higher EI scores (mean=152.9) compared to another major study (mean=96.10; Fredrickson et al., 2012). BFI scale trends are complex, and this issue is explored in the discussion section.

Table 2

Means, standard errors, and reliability estimates (n=115)

Variable	M (SD)	Cronbach alpha
1. Age	13.02 (2.12)	-
2. SES	11.49 (2.60)	-
3. Extraversion	3.68 (.75)	0.86
4. Agreeableness	3.97 (.57)	0.77
5. Conscientiousness	3.79 (.69)	0.82
6. Neuroticism	2.64 (.66)	0.73
7. Openness	3.97 (.59)	0.80
8. EI-total	152.89 (24.06)	0.88
9. YLLSDS	73.42 (7.91)	0.87

Note. Cronbach alpha for age and SES are not calculated. The means, standard deviations, and Cronbach alphas for gender and race/ethnicity are not reported because they are not interpretable.

Even though correlations, at most, can provide partial support for hypotheses, correlations serve as a stepping stone for further investigation, and the correlations between scales are reported in Table 3. The correlations provide partial support for hypothesis 1b, 1c, and 1d. YLLSDS is significantly and positively related to BFI-extraversion ($r = 0.37, p < 0.01$), BFI-openness ($r = 0.31, p < 0.01$), and BFI-agreeableness ($r = 0.31, p < 0.01$). The correlation between YLLSDS and BFI-neuroticism provides partial support for hypothesis 1a ($r = -0.20, p < 0.05$). We reject hypothesis 1e because the correlation between YLLSDS and BFI-conscientiousness is negative, which is not the hypothesized direction ($r = -0.35, p < 0.01$). Partial support for hypothesis 2 is demonstrated through the correlation between EI-total and YLLSDS ($r = 0.59, p < 0.01$).

Table 3

Correlations (n=115)

Variable	1.	2.	3.	4.	5.	6.	7.	8.
1. Age								
2. SES	-.23*							
3. Extraversion	-.19*	.13						
4. Agreeableness	-.34**	.21*	.17*					
5. Conscientiousness	-.37**	.22*	.13	.42**				
6. Neuroticism	.11	.01	-.13	-.38**	-.29**			
7. Openness	-.41**	.15	.27*	.34**	.15	-.01		
8. EI-total	-.21*	.22**	.13**	.41**	.47**	-.38**	.36**	
9. YLLSDS	-.04	.14	.37**	.31**	-.35**	-.20*	.31**	.59**

* $p < .05$. ** $p < .01$.

The results from the regression analysis are reported in Table 4. When all variables were included in the model, EI and age were the only significant predictors of self-perceived leadership skills in youth. Based on the standardized estimates listed in Table 4, YLLSDS is predicted to increase by one standard deviation for a 0.22 increase in standard deviation units of age while

holding all other predictors constant. While holding all other predictors constant, we would further expect a one standard deviation unit increase in YLLSDS with a 0.47 increase in emotional intelligence standard deviation units.

Table 4

Standardized parameter estimates and sums of squares (N=115)

Parameter	Standardized Estimate	Type III Sums of Squares
Age	0.22*	208.96*
Gender		104.53
Boy	-0.13	
Race/Ethnicity		71.31
American Indian or Alaskan Native	0.06	
Asian or Pacific Islander	0.01	
Hispanic, Latino, or Spanish origin	-0.05	
Other	0.07	
SES	-0.00	0.07
BFI-extraversion	0.01	0.51
BFI-agreeableness	0.06	13.38
BFI-conscientiousness	0.17	118.02
BFI-neuroticism	-0.01	1.01
BFI-openness	0.18	154.60
EI-total	0.47**	863.91**
R^2	0.43	
<i>Adjusted R²</i>	0.35	
<i>F</i>	5.77**	

Note. Race/Ethnicity-White and Gender-Girl are the reference groups.

* $p < .05$. ** $p < .001$.

These results further support hypothesis 2, but provide support to reject hypotheses 1a, 1b, 1c, 1d, and 1e. Based on the Type III Sums of Squares reported in Table 4, the overall model, including all the predictors, significantly predicted the variation in YLLSDS scores ($R^2=0.43$, $F=5.77$, $p<0.001$). When adjusted for the non-significant variables, the model accounted for 35.3% (Adjusted $R^2=0.353$) of the variation in YLLSDS scores.

In sum, hypotheses 1a, 1b, 1c, and 1d were partially supported relative to the direction and significance of the relationship between neuroticism, extraversion, openness, agreeableness, and self-perceived leadership skills. Hypothesis 1e was rejected; conscientiousness was neither positively nor significantly related to self-perceived leadership skills. Simply, none of the Big Five personality factors significantly predicted self-perceived leadership skills. Hypothesis 2 was confirmed relative to the direction and significance of the relationship between EI and self-perceived leadership skills, in that EI significantly predicted self-perceived leadership skills.

Discussion

Conclusions

Regression analyses from the current study identified emotional intelligence as the strongest predictor of self-perceived leadership skills, even after controlling for age, gender, race/ethnicity, and socioeconomic status (SES), thus confirming hypothesis 2. While the model including all variables (age, gender, race/ethnicity, SES, extraversion, agreeableness, conscientiousness, neuroticism, openness, and emotional intelligence) explained 35.3% of the variance in self-perceived leadership skills among the youth surveyed, age and emotional intelligence were the only significant predictors of self-perceived leadership skills. Furthermore, emotional intelligence explained over four times the amount of variance in self-perceived leadership skills than age. Thus, one can reasonably conclude from these findings that trait-based emotional intelligence is the strongest and most reliable predictor of self-perceived leadership skills among sampled youth leaders.

Recall that emotional intelligence is broadly defined as “the set of abilities (verbal and non-verbal) that enable a person to generate, recognize, express, understand, and evaluate their own and others’ emotions in order to guide thinking and action that successfully cope with environmental demands and pressures” (Van Rooy & Viswesvaran, 2004, p. 72). The results of the current study suggest that youth who demonstrate an innate ability to successfully marshal their emotions and the emotions of others perceive themselves as having high leadership skills. A common denominator among most definitions of leadership is the notion of *influence*—leaders seem to exert some sort of influence on others through their relationships (Yukl, 2006). Perhaps, then, we should not be surprised that youth leaders who can effectively regulate their own emotions and negotiate the emotions of others are more capable of influence in a myriad of social settings, thus explaining higher self-perceived leadership skills.

But why was emotional intelligence a better predictor of self-perceived leadership skills than personality? Age trends in personality research may offer insight to this question. Soto, John, Gosling, and Potter (2011) examined age trends in personality traits among 1,267,218 children, adolescents, and adults (ages 10 – 65). The results of their age trend analysis revealed distinct and profound trends in personality across late childhood and adolescence compared to adulthood trends. Respondent scores demonstrated a distinct negative trend on agreeableness, conscientiousness, extraversion, and openness between the ages of 10 and 20 whereas respondent scores demonstrated a steady or upward trend on these factors between the ages of 20 and 65. Neuroticism trends between 10 and 20 differed by gender—male respondents demonstrated a downward trend and females demonstrated an upward trend, again distinct from adulthood trends. Soto et al. concluded that late childhood and adolescence are important periods for understanding lifespan trends in personality traits considering some traits showed substantial and profound trends only during those periods or showed curvilinear trends in an opposite direction from trends during adulthood. The results from Soto et al.’s (2011) study perhaps explain why personality factors were not significant predictors of self-perceived leadership skills in the current study, in that age and personality do not exhibit a stable trend during adolescence. Furthermore, correlation analyses from the current study revealed a significant relationship between age and each of the personality factors, but revealed a non-significant relationship between age and emotional intelligence. Thus, the results of the current study suggest that emotional intelligence could be a stable and reliable predictor of self-perceived leadership skills in youth.

Limitations

Multiple regression has inherent limitations when attempting to infer causality from a non-experimental or quasi-experimental research design. In order to conclude that trait-based

emotional intelligence caused higher self-perceived leadership skills, a longitudinal research design would be required to identify such a relationship. Therefore, we can only infer that trait-based emotional intelligence is the most significant predictor of self-perceived leadership skills among youth leaders at one given point in time.

Considering the current study's design involved intact groups and minimal racial and ethnic diversity, it would be erroneous to infer that trait-based emotional intelligence is the most significant predictor of self-perceived leadership skills among *all* youth leaders. Furthermore, as discussed in the results section, the youth participating in our sample had higher scores on EI and leadership skills. The higher scores are not surprising given that these students, along with their parents, chose to invest time and energy in leadership development during the summer. Although this sample of students was appropriate to our research purpose, the generalizability of our findings to other populations is impacted.

While age, gender, SES, and race/ethnicity were entered as "control" variables, this should not imply that these variables were literally controlled. In social science research, controlling variables is practically impossible. Rather, the results of this study suggest that trait-based emotional intelligence is the most significant predictor of self-perceived leadership skills while holding the control variables constant.

Future Research

Future agricultural leadership research in youth populations may benefit from assessing leadership effectiveness using more objective measures. The Youth Leadership Life Skills Development Scale (YLLSDS) is designed to be a *self-assessment* of leadership skills—youth respondents rate themselves on their level of leadership skills as opposed to being rated by peers, subordinates, or supervisors. Thus, one should exercise caution in recognizing that the results of the current study only suggest that students who are more emotionally intelligent tend to rate *themselves* higher on leadership skills. Whether or not these emotionally intelligent students actually demonstrate effective leadership in the eyes of others remains to be seen.

The predictive power of emotional intelligence in assessing leadership as demonstrated in the current study, however, offers an interesting question for future research: Does emotional intelligence predict leadership in a more objective way? As stated earlier, the common denominator among definitions of leadership is the notion of influence—leaders tend to have a distinct and profound influence over others. Future research in this vein could benefit from examining the empirical relationship between trait-based emotional intelligence and objective influence in youth leaders as measured through a sociogram of respondent peers, subordinates, and supervisors.

Future researchers interested in replicating and furthering the results of the current study could provide enormous value by (a) examining the moderating and mediating effects of age and (b) analyzing the two sampled groups separately. As one reviewer suggested, since age (by itself) was not significantly correlated with YLLSDS, the interaction effect between age and other predictor variables should be further explored. Another reviewer suggested analyzing the two sampled groups separately considering one group was identified by principals and teachers as having high leadership potential and the other group was comprised of self-selected leaders. As was discussed in the Methods section, the two groups were combined in order to satisfy appropriate power requirements. If the current study were replicated with larger groups, the two groups could be analyzed separately without greatly reducing power.

Practical Recommendations: Improving Leadership Training in Youth

Based on our results, EI should be considered when training youth leaders. While several studies have documented a relationship between 4-H/FFA participation and self-perceived

leadership skills (Dormody & Seevers, 1994; Flynn et al., 2009; Seevers & Dormody, 1994; Wingenbach & Kahler, 1997), little variance in self-perceived leadership skills has been explained exclusively by involvement in such programs. The most variance in leadership skills predicted solely by either program was 12.6% (Seevers & Dormody, 1994). 4-H and FFA programs are certainly designed to develop leadership in youth (Carter & Spotanski, 1989); thus, the predictive power of trait-based emotional intelligence (EI) in assessing self-perceived leadership skills should perhaps inform curriculum development decisions for such programs.

Mavroceli et al. (2008) outlined several domains relative to trait-based emotional intelligence in youth: (a) adaptability (adapting to new situations and people), (b) affective disposition (frequency and intensity with which one experiences emotions), (c) emotion expression (how effectively one expresses emotions), (d) emotion regulation (how effectively one can control emotions), (e) low impulsivity (how effectively one can control themselves), (f) peer relations (quality of relationships with others), (g) self-esteem (perception of self-worth), and (h) self-motivation (perception of drive and motivation). Even though traits are relatively stable over time, developing skills to enhance abilities associated with emotional intelligence may prove fruitful in 4-H and FFA program development. Furthermore, youth participants in 4-H and FFA may benefit from reviewing the results of their personal trait-based emotional intelligence assessment during leadership development activities. Considering the predictive power of trait-based emotional intelligence compared to personality factors, 4-H and FFA youth participants may derive more benefit from examining their personal emotional intelligence than examining their personality type.

To conclude, Hastings, Barrett, Barbuto, and Bell (2011) offered from their study of youth leadership development and community engagement that youth leaders tend to be a community's most influential subgroup. Priority six of the American Association for Agricultural Education's Research Priority Areas (Doerfert, 2011) is centered around community development, declaring that research furthering this priority should, "examine the aspects of vibrant, resilient communities that encourage youth and adults to become future members and leaders of the community" and should "design and test models for increasing civic engagement in local communities and for increasing the social capital of local communities." The results of the current study provide compelling evidence for how a community could increase and leverage the human capital of its youth leaders through a deliberate focus on emotional intelligence in an effort to increase their value to their community's social capital fabric.

References

- Barbuto, J. E., & Burbach, M. E. (2006). The emotional intelligence of transformational leaders: A field study of elected officials. *The Journal of Social Psychology, 146*(1), 51-64. doi:10.3200/SOCP.146.1.51-64
- Bar-On, R. (1997). *Bar-On Emotional Quotient Inventory (EQ-i) technical manual*. Toronto, Canada: Multi-Health Systems.
- Barratt, W. (2012). *The Barratt Simplified Measure of Social Status (BSMSS) measuring SES*. Retrieved from <http://socialclassoncampus.blogspot.com/2012/06/barratt-simplified-measure-of-social.html>
- Benet-Martinez, V., & John, O. P. (1998). Los cinco grandes across cultures and ethnic groups: Multitrait multimethod analyses of the big five in Spanish and English. *Journal of Personality and Social Psychology, 75*, 729-750. doi:10.1037/0022-3514.75.3.729

- Brown, F. W., Bryant, S. C., & Reilly, M. D. (2006). Does emotional intelligence - as measured by the EQI - influence transformational leadership and/or desirable outcomes? *Leadership & Organization Development Journal*, 27(5), 330-351. doi:10.1108/01437730610677954
- Carter, R. I., & Spotanski, D. R. (1989). Perceptions of leadership and personal development of selected high school students in Iowa. *Journal of Agricultural Education*, 30(4), 30 – 34. doi:10.5032/jae.1989.04030
- Center for Applied Rural Innovation. (2012). *Community well-being in nonmetropolitan Nebraska*. Nebraska Rural Poll. Retrieved from <http://ruralpoll.unl.edu>.
- Costa, P. T., & McCrae, R. R. (1992). *Revised NEO Personality Inventory (NEO PI-R) and NEO Five-Factor Inventory (NEO-FFI) professional manual*. Odessa, FL: Psychological Assessment Resources.
- Darst, K. V. (1998). *The Myers-Briggs type of college student leaders: A comparison of a residential and a commuter campus*. (Doctoral dissertation). Retrieved from ProQuest Dissertations & Theses A&I. (304420617)
- Doerfert, D. L. (Ed.) (2011). National research agenda: American Association for Agricultural Education's research priority areas for 2011-2015. Lubbock, TX: Texas Tech University, Department of Agricultural Education and Communications.
- Dormody, T. J., & SeEVERS, B. S. (1994). Predicting youth leadership life skills development among FFA members in Arizona, Colorado, and New Mexico. *Journal of Agricultural Education*, 35(2), 65 – 71. doi:10.5032/jae.1994.02065
- Duncan, R. D. (2000). *Youth leadership life skills development of participants in the West Virginia 4-H camping program*, (Masters thesis). Retrieved from <http://wvusolar.wvu.edu>
- Flemming, E. G. (1935). A factor analysis of the personality of high school leaders. *Journal of Applied Psychology*, 5, 596 – 605. doi:10.1037/h0052228
- Flynn, A. M., Igo, C. G., & Frick, M. J. (2009). Leadership life skills of Montana 4-H youth: An analysis of influences. *Proceedings of the American Association for Agricultural Education Research Conference*, (pp. 257-271).
- Frederickson, N., Petrides, K. V., & Simmonds, E. (2012). *Journal of Personality and Individual Differences*, 52, 323 – 328. doi:10.1016/j.paid.2011.10.034
- Furnham, A., Moutafi, J., & Crump, J. (2003). The relationship between the revised NEO-personality inventory and the Myers-Briggs Type Indicator. *Social Behavior and Personality*, 31(6), 577-584. doi:10.2224/sbp.2003.31.6.577
- Gardner, W. L., & Martinko, M. J. (1996). Using the Myers-Briggs Type Indicator to study managers: A literature review and research agenda. *Journal of Management*, 22(1), 45-83. doi:10.1177/014920639602200103

- George, E. I., & Abraham, P. A. (1966). A comparative study of leaders and non-leaders among pupils in secondary schools. *Journal of Psychological Researches*, *10*, 116 – 120.
- Goldberg, L. R. (1992). The development of markers for the big-five factor structure. *Psychological Assessment*, *4*, 26-42. doi:10.1037/1040-3590.4.1.26
- Goleman, G. (1995). *Emotional intelligence*. New York, NY: Bantam.
- Harms, P. D., & Credé, M. (2010). Emotional intelligence and transformational and transactional leadership: A meta-analysis. *Journal of Leadership and Organizational Studies*, *17*(1), 5-17. doi:10.1177/1548051809350894
- Hastings, L. J., Barrett, L. A., Barbuto, J. E., & Bell, L. C. (2011). Developing a paradigm model of youth leadership development and community engagement: A grounded theory. *Journal of Agricultural Education*, *52*(1), 19 – 29. doi:10.5032/jae.201101019.
- Hollingshead, A. B. (1957). *Two factor index of social position*, Unpublished manuscript, Department of Sociology, Yale University, New Haven, CT.
- Hollingshead, A. B. (1975). *Four factor index of social position*, Unpublished manuscript, Department of Sociology, Yale University, New Haven, CT.
- Hunter, E. C., & Jordan, A. M. (1939). An analysis of qualities associated with leadership among college students. *Journal of Educational Psychology*, *30*, 497 – 509. doi:10.1037/h0059722
- John, O. P., Donahue, E. M., & Kentle, R. L. (1991). *The big five inventory-Versions 4a and 54*. Berkley, CA: University of California Berkeley, Institute of Personality and Social Research.
- John, O. P., Naumann, L. P., & Soto, C. J. (2008). Paradigm shift to the integrative big-five trait taxonomy: History, measurement, and conceptual issues. In O. P. John, R. W. Robins, & L. A. Pervin (Eds.), *Handbook on personality: Theory and research* (pp. 114-158). New York, NY: Guilford Press.
- Judge, T. A., Bono, J. E., Ilies, R., Gerhardt, M.W. (2002). Personality and leadership: A qualitative and quantitative review. *Journal of Applied Psychology*, *87*(4), 765 – 780. doi:10.1037/0021-9010.87.4.765
- Judge, T. A., & Illies, R. (2002). Relationship of personality and to performance motivation: A meta-analysis. *Journal of Applied Psychology*, *87*(4), 797-807. doi:10.1037/0021-9010.87.4.797
- Judge, T. A., Heller, D., & Mount, M. K. (2002). Five-factor model of personality and job satisfaction: A meta-analysis. *Journal of Applied Psychology*, *87*(3), 530-541. doi:10.1037/0021-9010.87.3.530
- Jung, C. G. (1971). *Psychological types*. Princeton, NJ: Princeton University Press.

- Karnes, F. A., & D'Ilio, V. R. (1990). Correlations between personality and leadership concepts and skills as measured by the High School Personality Questionnaire and the Leadership Skills Inventory. *Psychological Reports*, 66, 851 – 856. doi:10.2466/pr0.1990.66.3.851
- Karnes, F. A., & McGinnis, J. C. (1996). Scores on indicators of leadership skills, locus of control, and self-actualization for student leaders in grades 6 to 10. *Psychological Reports*, 78, 1235 – 1240. doi:10.2466/pr0.1996.78.3c.1235
- Kureshi, A., & Fatima, B. (1984). Power motive among student leaders and non-leaders: Testing the affective-arousal model. *Journal of Psychological Researches*, 28, 21 – 24.
- Landau, E., & Weissler, K. (1990). Tracing leadership in gifted children. *Journal of Psychology*, 125, 681– 688. doi:10.1080/00223980.1991.10543331
- Luthans, F. (2011). *Organizational behavior: An evidence-based approach* (12th ed.). New York, NY: McGraw-Hill.
- Macke, D., Markley, D., & Binerer, A. (2011). *Transfer of wealth in rural America*. Lincoln, NE: Center for Rural Entrepreneurship.
- Mavroveli, S., Petrides, K. V., Shove, C., & Whitehead, A. (2008). Investigation of the construct of trait emotional intelligence in children. *Journal of European Child and Adolescent Psychiatry*, 17(8), 516 – 526. doi:10.1007/s00787-008-0696-6
- Mayer, J. D., & Salovey, P. (1997). What is emotional intelligence? In P. Salovey, & D. Sluyter (Eds.), *Emotional development and emotional intelligence* (pp. 3-23). New York, NY: Basic Books.
- Mayer, J. D., Roberts, R. D., & Barsade, S. G. (2008). Human abilities: Emotional intelligence. *Annual Review of Psychology*, 59, 507-536. doi:10.1146/annurev.psych.59.103006.093646
- Mayer, J. D., Salovey, P., & Caruso, D. R. (2000). Competing models of emotional intelligence. In J. R. Sternberg (Ed.), *Handbook of human intelligence* (pp. 396-420). New York, NY: Cambridge University Press. doi:10.1017/CBO9780511807947.019
- Mayer, J. D., Salovey, P., & Caruso, D. R. (2004). Emotional intelligence: Theory, findings, and implications. *Psychological Inquiry*, 15(3), 197-215. doi:10.1207/s15327965pli1503_02
- Mikolajczak, M., Luminet, O., Leroy, C., & Roy, E. (2007). Psychometric properties of the Trait Emotional Intelligence Questionnaire: Factor structure, reliability, construct, and incremental validity in a French-speaking population. *Journal of Personality Assessment*, 88(3), 338-353. doi:10.1080/00223890701333431
- McCullough, P. M., Ashbridge, D., & Pegg, R. (1994). The effect of self-esteem, family structure, locus of control, and career goals on adolescent leadership behavior. *Adolescence*, 29, 605 – 611.
- Moore, L. L., & Rudd, R. D. (2004). Leadership skills and competencies for extension directors and administrators. *Journal of Agricultural Education*, 45(3), 22 – 33. doi:10.5032/jae.2004.03022

- Moore, L. L., & Rudd, R. D. (2005). Extension leaders' self-evaluation of leadership skills areas. *Journal of Agricultural Education, 46*(1), 68 – 78. doi:10.5032/jae.2005.01068
- Northouse, P. G. (2012). *Leadership: Theory and practice*. Sage.
- O'Connor, R. M., & Little, I. S. (2003). Revisiting the predictive validity of emotional intelligence: Self-report versus ability-based measures. *Personality and Individual Differences, 35*, 1893-1902. doi:10.1016/S0191-8869(03)00038-2
- Owings, J. A., & Nelson, C. L. (1979). FFA leaders and personality traits. *Journal of Agricultural Education, 20*(1), 40 – 44.
- Palmer, B., Walls, M., Burgess, Z., & Stough, C. (2001). Emotional intelligence and effective leadership. *Leadership & Organization Development Journal, 22*(1), 5-10. doi:10.1108/01437730110380174
- Pérez, J. C., Petrides, K. V., & Furnham, A. (2005). Measuring trait emotional intelligence. In R. Schulze, & R. D. Roberts (Eds.), *International handbook of emotional intelligence* (pp. 123-143). Cambridge, MA: Hogrefe & Huber.
- Petrides, K. V. (2009b). Psychometric properties of the Trait Emotional Intelligence Questionnaire (TEIQue). In C. Stough, D. H. Saklofske, & J. D. Parker (Eds.), *Assessing emotional intelligence* (pp. 85-101). Springer US. doi:10.1007/978-0-387-88370-0_5
- Petrides, K. V., & Furnham, A. (2000). On the dimensional structure of emotional intelligence. *Personality and Individual Differences, 29*(2), 313-320. doi:10.1016/S0191-8869(99)00195-6
- Petrides, K. V., & Furnham, A. (2001). Trait emotional intelligence: Psychometric investigation with reference to established trait taxonomies. *European Journal of Personality, 15*(6), 425-448. doi:10.1002/per.416
- Petrides, K. V., & Furnham, A. (2006). The role of trait emotional intelligence in a gender-specific model of organizational variables. *Journal of Applied Social Psychology, 36*(2), 552-569. doi:10.1111/j.0021-9029.2006.00019.x
- Petrides, K. V., Sangareau, Y., Furnham, A., & Frederickson, N. (2006). Trait emotional intelligence and children's peer relations at school. *Journal of Social Development, 15*(3), 537 – 547. doi:10.1111/j.1467-9507.2006.00355.x
- Quoidbach, J., & Hansenne, M. (2009). The impact of trait emotional intelligence on nursing team performance and cohesiveness. *Journal of Professional Nursing, 25*(1), 23-29. doi:10.1016/j.profnurs.2007.12.002
- Rosete, D., & Ciarrochi, J. (2005). Emotional intelligence and its relationship to workplace performance outcomes of leadership effectiveness. *Leadership & Organization Development, 26*(5), 388-399. doi:10.1108/01437730510607871
- Saucier, G. (1994). Mini-markers: A brief version of Goldberg's unipolar big-five markers. *Journal of Personality Assessment, 63*, 506-516. doi:10.1207/s15327752jpa6303_8

- Schutte, N. S., Malouff, J. M., Hall, L. E., Haggerty, D. J., Cooper, J. T., Golden, C. J., et al. (1998). Development and validation of a measure of emotional intelligence. *Personality and Individual Differences*, 25(2), 167-177. doi:10.1016/S0191-8869(98)00001-4
- Seevers, B., & Dormody, T. J. (1994). Predicting youth life leadership skills development among senior 4-H members. *Journal of Agricultural Education*, 35(3), 64 – 69. doi:10.5032/jae.1994.03064
- Seevers, B. S., Dormody, T. J., & Clason, D. L. (1995). Developing a scale to research and evaluate youth leadership life skills development. *Journal of Agricultural Education*, 36(2), 28-34. doi:10.5032/jae.1995.02028
- Sinha, D., & Kumar, P. (1966). A study of certain personality variables in student leadership. *Psychological Studies*, 11, 1 – 8.
- Smith, T. A., Genry, L. S., & Ketring, S. A. (2005). Evaluating a youth leadership life skills development program. *Journal of Extension*, 43(2).
- Soper, D. (2013). Statistics calculators. Retrieved from <http://www.danielsoper.com/statcalc3/default.aspx>
- Soto, C. J., John, O. P., Gosling, S. D., & Potter, J. (2008). The developmental psychometrics of big five self-reports: Acquiescence, factor structure, coherence, and differentiation from ages 10 to 20. *Journal of Personality and Social Psychology*, 94(4), 718-737. doi:10.1037/0022-3514.94.4.718
- Soto, C. J., John, O. P., Gosling, S. D., & Potter, J. (2011). Age differences in personality traits from 10 to 65: Big five domains and facets in large cross-sectional sample. *Journal of Personality and Social Psychology*, 100(2), 330 – 348. doi:10.1037/a0021717
- Spector, P. E. (2005). Introduction: Emotional Intelligence. *Journal of Organizational Behavior*, 26(4), 409-410. doi:10.1002/job.316
- Sy, T. T., & O'Hara, L. A. (2006). Relation of employee and manager emotional intelligence to job satisfaction and performance. *Journal of Vocational Behavior*, 68, 461-473. doi:10.1016/j.jvb.2005.10.003
- U.S. Bureau of Labor Statistics. (2012). Current population survey. Retrieved from <http://www.bls.gov>
- U.S. Census Bureau, 2010 Census Briefs. (2010). Age and sex composition: 2010 (U.S. Census Bureau Publication No. C2010BR-03). Retrieved from <http://www.census.gov>
- Van Linden, J. A., & Fertman, C. I. (1998). *Youth leadership: A guide to understanding leadership development in adolescents*. San Francisco, CA: Jossey-Bass.
- Van Rooy, D. L., & Viswesvaran, C. (2004). Emotional intelligence: A meta-analytic investigation of predictive validity and nomological net. *Vocational Behavior*, 65, 71-95. doi:10.1016/S0001-8791(03)00076-9

- Wingenbach, G. J. (2000). Personality types and final grades in group organization and leadership development. *Proceedings of the 27th Annual National Agricultural Education Research Conference*, (pp. 69 - 80).
- Wingenbach, G. J., & Kahler, A. A. (1997). Self-perceived youth leadership life skills of Iowa FFA members. *Journal of Agricultural Education*, 38(3), 18-27. doi: 10.5032/jae.1997.03018
- Yukl, G. (2006). *Leadership in organizations* (6th Ed.). Upper Saddle River, NJ: Pearson Education, Inc.