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INVESTIGATING A POTENTIAL RELATIONSHIP BETWEEN SIBLING GENDER COMPOSITION AND HEALTH BEHAVIOR INDICATORS IN YOUNG ADULT AND ADOLESCENT MALES

by

TAYLOR NICOLE GOSS

A thesis submitted in partial fulfillment of the requirements
for the Honors in the Major Program in Health Sciences
in the College of Health and Public Affairs
at the University of Central Florida
Orlando, Florida

Spring Term, 2018

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ABSTRACT

The presence of siblings during childhood and adolescence has a significant impact on the behaviors and perceptions of adults later in life. Effects of mixed-gendered sibling dyads on delinquent behavior, gender typing, and romantic and sexual relationships are of interest. These behaviors can lead to notable health disparities, making it imperative to gain insight into factors associated with such behaviors in young adult and adolescent males. This project explored possible correlations between gender composition of siblings and health behavior indicators for violence, competition and risk, and sexual and romantic relationships. Analysis of these variables was performed using data from the Young Adult and Adolescent Male Health Behavior Indicator Scale [YAAMHBIS]. Descriptive analyses showed YAAM understanding of abuse and successful marriage and relationship qualities, as well as a conditional acceptance of violence, competition, and risk. Means testing between those with and without sisters indicated that those with sisters acknowledged abuse, marriage qualities, and the consequences of infidelity. Additionally, those with sisters had, on average, an earlier age of sexual debut than those without supporting previous research regarding the effects of female communication in childhood on adult interactions. The correlations found between sibling gender and YAAM perceptions later in life could lay the groundwork for future studies further investigating sibling gender or split households and an association with health behaviors.

Key Words: young adult males, adolescents, sibling effects, sisters, secondary analysis, health behavior indicators, violence, reproductive health, competition and risk

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STUDY AIMS

Aim 1: To determine if a correlation exists between growing up in a house with a female sibling and health behavior indicators for violence, risk-seeking tendencies, and adverse relationship behaviors in young-adult/adolescent males.

Aim 2: To investigate the possibility of an additional correlation between growing up in a house with all female siblings and health behavior indicators for violence, risk-seeking tendencies, and adverse relationship behaviors in young-adult/adolescent males.

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REVIEW OF THE LITERATURE

Sibling Influence on Behavior

Adler's theory of individual psychology theorizes that personality development is affected markedly by their interactions with their siblings and by the parental treatment of an individual relative to their siblings (Ansbacher & Ansbacher, 1956). Differences in parental treatment, including conflict, warmth, and perceived fairness compared to a sibling, affect an individual's likelihood of displaying depressive symptoms and psychological internalization showing that perception of parental behaviors can have a substantial impact on adult life (Shanahan et al., 2008; Feinberg & Hetherington, 2001).

While the presence of a sibling can affect parental treatment of the individual, the sibling has an even larger effect on the individual through the lifespan. Siblings' effects on delinquency, substance use, and criminal activity have been observed throughout the literature (Rowe & Gulley, 1992; Scholte et al., 2008; Whiteman, McHale, & Crouter, 2007; Fagan & Najman, 2003). Beyond the general influence of siblings, studies have shown that having same-sex siblings, specifically, was correlated with an increase in antisocial and delinquent behavior as compared to families with mixed-gendered siblings (Slomkowski et al., 2001).

Extending past delinquency and deviance to other health issues, sibling interaction has been shown to affect the age of sexual debut and attitudes towards teenage pregnancy (Widmer, 1997; East, 1998; McHale, Bissell, & Kim, 2009; McHale, Updegraff, & Whiteman, 2012). These observations stem from the idea that in early adolescence, children will look to their siblings for advice and education on romantic and sexual relationships. Therefore, these

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opposite-sex siblings play a significant role on the development of gender typing, sexual health perceptions, and interactions with the opposite sex (Galambos, Berenbaum, & McHale, 2009; Rust et al., 2000). Later in life, these perceptions and intersocial interactions can be critical in the development of an individual's attitudes and behaviors. Most notably for the present study, such behavioral changes in opposite-sex social interactions could manifest as healthier romantic relationships, a decreased likelihood of violent crimes against women, or an increased likelihood of intervening in such crimes if witnessed. This is supported by previous findings suggesting that bystanders were more likely to intervene if they felt some connection or similarity to the victim (Burns, 2008; Banyard, 2011).

Effects of Female Siblings on their Brothers

Previous research finds that the presence of a female sibling can affect young adult and adolescent males' [YAAMs'] competitive behaviors, educational attainment and performance, and health behaviors in part because of the way families have historically treated their sons versus their daughters. A gender-divide in the allocation of familial resources can lead to better health outcomes for males with more sisters as compared to those with brothers (Garg & Morduch, 1998). The authors posit that in traditional familial social-structures, parents invest more resources into their male children because they will inherit the family while female children will leave to join another family and therefore do not have as much "return on investment." This gender-specific idea of resource-competition between siblings is supported by literature stating that brother-brother sibling dyads carried the most negative impact on behavior and aggression (Tucker et al., 2016; Garg & Morduch, 1998; Matthews, Delaney, & Adamek, 1989). Contrarily, males with sisters are less likely to show competitive behaviors than those

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without since they did not have to compete for familial resources as frequently as those with brothers (Okudaira et al., 2015; Buehren et al., 2016).

Bissell-Havran found that competition for resources may even extend to parental investment in education, causing sisters to work harder in educational systems while their brothers eventually develop negative schooling habits. In sibling dyads of sisters and brothers, the sister was found to be more likely to perceive higher parental expectations, obtain higher grades in school, and attend college compared to their brothers (Bissell-Havran, Loken, & McHale, 2012). In addition, the effects of sisters on their brothers have been demonstrated to extend to YAAM health. Camacho et al. (2017) found that males with more sisters were more likely to participate in physical activity while those with more brothers were more likely to partake in substance use and other adverse health predictors. Both of these issues with college retention and substance use are areas where YAAM are shown to be severely lacking (Spruill, Hirt, & Mo, 2014; Vasilenko, Evans-Polce, & Lanza, 2017).

Negative Health Behaviors in Young Adult and Adolescent Males

Regardless of sibling composition, the literature reports that YAAM are already at an increased risk for adverse health outcomes due to negative health attitudes or lack of resources. YAAM health behaviors are affected by an increase in risk-seeking behaviors that societal norms associate with adolescence (Leone et al., 2014; Stanford Children's Health Center, 2014). These behaviors include impulsivity and vulnerability, being less aware of the negative consequences of gratifying behaviors, and decision-making that is more focused on immediate outcomes and less focused on distant outcomes (Bjork et al. 2004; Reppucci, 1999). The literature shows that YAAMs realize and acknowledge the importance of their health but do not seek preventive or

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timely medical care (Davies et al., 2010). YAAMs' involvement in violence, substance abuse, and a reduced inclination towards seeking healthcare services are congruent behaviors with the gender-based societal norms that are placed on this population (Möller-Leimkühler, 2003; Shaw, 2009).

Specifically, lack of medical-care-seeking behavior is compounded by a lack of adequate resources for YAAM commonly found in the current healthcare system. For instance, Choiriyyah et al. (2015) reports that 60% of males are in greater need of preconception counseling compared to females; with males aged 15-29 having the highest need for preconception care guidance. With this in mind, increasing YAAM access to education and clinical services related to the avoidance of unintended pregnancies and sexually transmitted infections could improve reproductive health for all (Choiriyyah et al., 2015).

YAAM have a significant prevalence of depression and mental illness compared to their female counterparts, which can result in unhealthy, self-deprecating, and aggressive behaviors (Möller-Leimkühler, 2003). One of these negative health behaviors is alcohol abuse, which is more common in males under 17 than in females of the same age group (Davies et al., 2010). Similarly, males are also found to be at an increased risk of accidental injury and death by suicide compared to females (Kochanek et al., 2016; Möller-Leimkühler, 2003). The Youth Risk Behavior Survey of 2013 (Kann et al., 2014) reported an increased likelihood of males being involved in violent behaviors [i.e., carrying weapons to school] and getting hurt from engaging in school fights. These patterns of aggression and impulsivity also manifest themselves in the high incidence of sexual assaults and homicides falling in this age group (Centers for Disease

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Control and Prevention, 2012; National Violent Deaths Reporting System, 2014) making YAAM negative behaviors and attitudes a public health and safety concern for both males and females.

Significance

Considering the extent of health disparities in the YAAM population, it is imperative to gain insight into predictors of specific health behaviors. Men are often pressured by societal norms to adopt maladaptive health behaviors to maintain a stable façade of manliness and independence (Dariotis et al., 2011; Hoyt et al., 2012; Tucker et al., 2014; Möller-Leimkühler, 2003; Shaw, 2009). If the presence of a sister in the household can create less defined gender typing in these YAAMs (Galambos, Berenbaum, & McHale, 2009), it stands to reason that they might not feel as inclined to display toxic-masculinity behaviors that negatively affect their health and the health of those around them. A female presence in childhood could make YAAM more likely to seek healthcare and display healthy romantic relationships resulting in improved health outcomes. In addition, YAAMs with female familial ties may be less likely to display violent, competitive, and risk-seeking behaviors towards women or may be more inclined to intervene as a bystander to such crimes. With these possibilities in mind, this study aims to investigate correlations between sibling gender and YAAM health behavior indicators for romantic and sexual relationships, competition and risk, and violence using data from novel instrumentation.

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RESEARCH DESIGN & METHODS

Study Design

This study utilized cross-sectional data from the *Young Adult and Adolescent Male Health Behavior Indicator Scale* [YAAMHBIS] (See Appendix) (Rovito et al., in preparation) to compare participants' responses regarding violent, risk-seeking, and sexual behaviors to the gender of their siblings. Respondants were categorized into the "absence of sister" group [sister ⊖] or "presence of sister" group [sister ⊕]. Of those with siblings, further categorization into "all female siblings," "all male siblings," or "mixed gendered siblings" occurred with a comparison group consisting of single children. Health behavior indicators were measured using data from survey items regarding violence, competition and risk, sexual relationships, and romantic relationships. This allowed for the execution of the primary aim to determine if any correlations exist between growing up with a sister present in the household and health behavior indicators later in life for YAAMs. A secondary aim was also explored to study any further correlations between the varying gender compositions of siblings and indicators for the measured health behavior indicators as a YAAM.

Sampling

Methodology. The YAAMHBIS acquired a voluntary response sample using a Qualtrics survey link sent via email to a listserv of approximately 6,000 males at the University of Central Florida. Various professional contacts assisted with recruitment efforts at academic settings in other geographical regions to obtain a more racially and ethnically diverse sample for increased external validity. Response rates are unknown due to the uncertainty of receipt of the link and

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any word-of-mouth recruitment that could have occurred. Distribution of the YAAMHBIS was approved by the Institutional Review Board at the University of Central Florida (UCF). Electronic consent was gathered from all participants at the start of the survey. No incentives were provided to participants during the YAAMHBIS distribution in question (Rovito et al., in preparation).

Inclusion and Exclusion Criteria. Responses from the YAAMHBIS dataset were included in this analysis if complete in the following sections: *Competition and Risk* [Section D], *Violence* [Section E], *Romantic Relationships* [Section F], *Family and Fatherhood* [Section G], and demographic questions regarding childhood household composition and relationship status. Responses incomplete in those sections were excluded. The only participant requirements for the YAAMHBIS were that participants identified as male and were 18-26 years old.

Instrumentation

The YAAMHBIS Development. Creation and distribution of the YAAMHBIS involved a three-phased mixed-methods approach (Rovito et al., 2017; Rovito et al., forthcoming 2018; Rovito et al., in preparation). The YAAMHBIS is a 199-item survey soliciting demographics and perceptions on (1) *masculinity*, focusing on how the participants described manhood and perceptional variances between a 'man' and a 'young man,' (2) *health and wellness*, including alcohol and drug use as well as eating and exercise habits, (3) *competition and risk*, focusing on benefits and downfalls of competition and risk-taking behaviors, (4) *violence*, asking participants to discuss violence in media and compare gender stereotypes pertaining to violence, (5) *romantic relationships*, containing questions on sexual history, sexual orientation, and perceptions of these

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relationships, (6) *family and fatherhood*, asking for participant's perceptions of a 'good' husband and 'good' father, (7) *friendship*, covering how friends are made and what is important for a successful friendship, (8) *success and values*, including what defines success and respect, and (9) *communication*, covering comfortability of communicating with individuals of varying familiarity and authority. Most items were formatted on an 11-point Likert scale from 0-10, with 0 representing strongly disagree and 10 representing strongly agree. The remaining items asked for short alphanumeric responses.

Reliability and Validity. The second phase of the YAAMHBIS development analyzed the reliability and validity of the acquired test-retest results. A range of acceptable Spearman ρ values of 0.61-0.91 was achieved on all but 6 of the 134 quantitative items. A panel of experts provided appropriate content and face validity (Rovito et al., forthcoming 2018).

Data Selection. For the current analysis, all eligible participant responses [n=437] were extracted from the larger sample (Rovito et al., in preparation). Data from Sections A [*Demographics*], D [*Competition and Risk*], E [*Violence*], F [*Romantic Relationships*], and G [*Family and Fatherhood*] were gathered from a mass distribution of the YAAMHBIS. From these sections, 33 items covering childhood household composition, relationship status, perceptions of competition, perceptions of risk, perceptions of violence in various facets of society and its associated gender stereotypes, perceptions of sex and sexual consent, perceptions of romantic relationships, sexual debut, and perceptions of a good marriage versus a bad marriage were analyzed. These items are presented in Table 1. All items were on a Likert scale unless otherwise stated.

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Table 1: YAAMHBIS items for analysis

Item #	Item Question	Directionality
A13	Who resided in your household as a child/adolescent? (Select all that apply)	None
D1	Competition is generally a good thing to have in society	↑value = ↑competition
D2	I consider myself to be a competitive person	↑value = ↑competition
D3	I consider myself to be a person who takes risks	↑value = ↑competition
D4	Males take more risks than females	↑value = ↑competition
D5	I feel that it is important for individuals to take risks to be successful	↑value = ↑competition
E1	Males are more violent than females	↑value = ↑violence
E2	I feel that physical force is sometimes necessary in an argument with one's significant other	↑value = ↑violence
E3	Being more violent makes me more of a man	↑value = ↑violence
E4	I feel that violence in sports is acceptable	↑value = ↑violence
E5	I feel that violence in TV and movies is acceptable	↑value = ↑violence
E6	I feel that violence in video games is acceptable	↑value = ↑violence
E7	I feel that violence in society is acceptable	↑value = ↑violence
E8	I feel that violence in relationships is acceptable	↑value = ↑violence
E9	I feel that abuse is a physical act	Nondirectional Likert
E10	I feel that abuse is a verbal act	Nondirectional Likert
E11	I feel that abuse is an emotional act	Nondirectional Likert
F2	A "hookup" is a purely physical encounter	↑value = ↑unhealthy
F10	I feel that nonconsensual sex is acceptable	↑value = ↑unhealthy
F11	I feel that men want to have sex more than women do	↑value = ↑unhealthy
F12	It is important to be faithful in a romantic relationship	↑value = ↓unhealthy
F13	I believe that cheating is acceptable in some situations	↑value = ↑unhealthy
F23	Indicate your age when you first engaged in sexual intercourse	Nondirectional Numeric
F24	Indicate the number of sexual partners you consider to be "a lot" or "many"	Nondirectional Numeric
F25	Indicate how many sexual partners you have had in your lifetime	Nondirectional Numeric
G1	A good marriage consists of commitment	↑value = ↓unhealthy
G2	A good marriage consists of love and care	↑value = ↓unhealthy
G4	A good marriage consists of emotional support	↑value = ↓unhealthy

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G7	A good marriage consists of selflessness	↑value = ↓unhealthy
G8	Infidelity can lead to a bad marriage	↑value = ↓unhealthy
G11	Selfishness can lead to a bad marriage	↑value = ↓unhealthy
G13	Dishonesty can lead to a bad marriage	↑value = ↓unhealthy
G14	Lack of communication can lead to a bad marriage	↑value = ↓unhealthy

Scoring Procedures. Many of the YAAMHBIS items were used as "directional" indicators for perceptions of the behavior being explored in that section. All directionality indications in the third column of Table 1 refer to the individuals' acceptance of the queried behavior and the phrase "unhealthy" in sections F and G refers to perceptions aligning with indicators of unhealthy sexual relationships and unhealthy romantic relationships, respectively. Inverse scoring was used for question F12, for which a high score would indicate a tendency towards a healthy sexual relationship instead of an unhealthy one, to better align that item's directionality to the others from that section. The remaining items were considered "non-directional" in that they do not provide a positive or negative indication of the perception of the behavior, rather they provide insight into the individuals' definition of the behavior or a demographic-like response.

A factor analysis was performed for dimensional reduction of the 29 selected Likert scale items. The Kaiser-Meyer-Olkin (KMO) value of 0.792 was above the commonly accepted value of 0.6, confirming that a factor analysis was appropriate for this data. Nine components showed initial Eigenvalues above 1.0 and explained a cumulative 67.43% variance. Items with factor loadings above 0.45 are reported in Table 2 under their respective component.

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Table 2: Factor Analysis Components

1	**0.867** – E9 Abuse / Physical	**0.946** – E10 Abuse / Verbal	**0.928** – E11 Abuse / Emotional	
2	**0.659** – G1 Good Marriage / Commitment	**0.777** – G2 Good Marriage / Love and Care	**0.791** – G4 Good Marriage / Emotional Support	**0.500** – G14 [o] Bad Marriage / Lack of Communication
3	**0.631** – E4 Violence in Sports	**0.912** – E5 Violence in TV + Movies	**0.910** – E6 Violence in Video Games	**0.480** – E7 Violence in Society
4	**0.739** – E2 Physical Force / Significant Other	**0.648** – E3 Violence / More of a Man	**0.662** – E8 Violence in Relationships	**0.671** – F10 Nonconsensual Sex / Acceptable
5	**0.758** – D1 Competition Good in Society	**0.800** – D2 Consider Myself Competitive	**0.719** – D3 Consider Myself / Takes Risks	**0.687** – D5 Risks Important for Success
6	**0.526** – G8 [o] Bad Marriage / Cheating	**0.742** – G11 Bad Marriage / Selfish	**0.667** – G13 Bad Marriage / Dishonesty	**0.633** – G14 [o] Bad Marriage / Lack of Communication
7	**0.772** – F12 (Reversed Scoring) Faithfulness Important	**0.729** – F13 Cheating Acceptable in Some Situations	**-0.553** – G8 [o] Bad Marriage / Cheating	
8	**0.742** – D4 Males Take More Risks than Females	**0.784** – E1 Males More Violent than Females	**0.612** – F11 Men Want to Have Sex More than Women	
9	**0.813** – F2 Hookup / Physical	**0.492** – G7 Good Marriage / Selfless		

[o] = cross loading

The following arbitrary titles were assigned to the nine components: (1) Abuse, (2) Good Marriage, (3) Violence in Society, (4) Violence in Relationships, (5) Competition and Risk, (6) Bad Marriage, (7) Infidelity, (8) Men Versus Women, and (9) Hookups and Selflessness. The responses for the items within each component were averaged to give an overall "score" for that factor, except results from non-directional items E9-11, which were analyzed separately from one another since they each define abuse differently. Items F23-F25 were also analyzed separately as non-directional results.

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Data Management

As a secondary data analysis, this project used participant responses that had all identifiable information redacted. No possible breaches of participant confidentiality were identified. IBM SPSS Statistics 24 software was used, under UCF's license, to perform all data analyses.

Data Analysis

All dependent variable measures were analyzed as continuous data with demographic responses being the only categorical data. Probability scores of $\alpha \leq 0.05$ were considered significant for hypothesis testing in this project.

Univariate Analyses. Descriptive analysis of the groups was performed to assess the distribution of sibling group assignment [no siblings, all sisters, all brothers, and mixed genders] with Chi-square analyses to explore any significant differences in demographic information between groups. The mean and standard deviation of individual item results were examined, regardless of group assignment. Normality, linearity, homoscedasticity, and independence were then examined to determine the appropriate analytic plan.

Presence of Sister Comparative Analyses. To determine if a correlation between the presence of a sister and behavioral perceptions existed, an independent samples *t*-test was used for means testing between the sister $\oplus$ and sister $\ominus$ groups for each component average and each non-directional item.

Sibling Gender Composition Comparative Analyses. For assessing if a correlation between sibling gender composition breakdown and behavioral perceptions existed the following

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analyses were run. The sisters ⊕ group was further separated into “all sisters” [♀] and “mixed genders” [⚥] while the sisters ⊖ group was broken into the “all brothers” [♂] group and single child comparison group. A one-way ANOVA was performed across all four groups for each component average and non-directional item average to compare means between these more specific independent variables.

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RESULTS

Demographics and Frequencies

Demographics. In total, 437 responses were eligible for inclusion in this analysis and distributed into four groups: single child (n=84), all brothers (n=136), all sisters (n=131), and mixed genders (n=87). The average age across all groups was 21.43 ± 2.24 years with similar average ages across all four groups. Education levels of respondents were skewed towards higher education due to the location of survey dissemination near university campuses. Racial and ethnic distribution is representative of United States adult averages with slightly higher rates of Asians and Hispanics in this sample (Humes, Jones, & Ramirez, 2011). The majority of participants in this analysis, 67.7%, indicated their relationship status as single with the remaining being mostly in unmarried relationships although there were a few instances of cohabitation, marriage, domestic partnerships, and other. All these demographic variables were similar across all groups (Table 3).

Pearson Chi-Square values were well above a typical acceptable significance value of 0.05 for age, education level, race, ethnicity, and relationship status. These results show that there are no statistically significant differences in demographic information between groups. Only the country of origin variable had a significance value below 0.05 suggesting a possible significant difference between groups for this variable (Table 3). Although, including those born in Puerto Rico, there were only 45 participants total who indicated that they were born outside of the United States (US). By group, the single children group had 15 participants not born in the US, the all brothers group had 9, the all sisters group had 10, and the mixed genders group had 11 participants not born in the US.

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Table 3: Participant demographics

	Single Child	All brothers	All sisters	Mixed genders	Chi-Square Significance
Total n=437	n=84	n=137	n=131	n=85	
Age (years)	21.45 ± 2.29	21.23 ± 2.24	21.50 ± 2.22	21.61 ± 2.23	0.89
Born in USA	68 (81.9%)	126 (92.6%)	120 (91.6%)	73 (89.0%)	0.01*
Education:					0.53
No college	10 (11.9%)	18 (13.1%)	11 (8.4%)	7 (8.2%)	
College	74 (88.1%)	119 (86.9%)	120 (91.6%)	78 (91.8%)	
Race:					0.39
White	51 (60.7%)	106 (77.4%)	96 (73.3%)	61 (71.8%)	
Black	15 (17.9%)	12 (8.8%)	14 (10.7%)	13 (15.3%)	
Asian	7 (8.3%)	8 (5.8%)	8 (6.1%)	6 (7.1%)	
Native Am.	1 (1.2%)	1 (0.7%)	1 (0.8%)	0	
Other	10 (11.9%)	10 (7.3%)	12 (9.2%)	5 (5.9%)	
Hispanic	Y: 19 (22.6%) N: 65 (77.4%)	Y: 29 (21.2%) N: 108 (78.8%)	Y: 24 (18.3%) N: 107 (81.7%)	Y: 16 (18.8%) N: 69 (81.2%)	0.82
Relationship:					0.82
Single	56 (66.7%)	93 (67.9%)	87 (66.4%)	60 (70.6%)	
Unmarried Rel.	20 (23.8%)	33 (24.1%)	33 (25.2%)	20 (23.5%)	
Cohabitation	5 (6.0%)	6 (4.4%)	9 (6.9%)	3 (3.5%)	
Domestic	0	1 (0.7%)	1 (0.8%)	0	
Married	2 (2.4%)	4 (2.9%)	1 (0.8%)	1 (1.2%)	
Other	1 (1.2%)	0	0	1 (1.2%)	

Frequencies. Of the items measured, 29 Likert scale items and three numeric response items were analyzed for the frequency distributions and mean responses (Table 4). Items in the Abuse factor (1) were all skewed to the right with scores indicating higher levels of agreement towards statements about the three different facets of abuse: physical, verbal, and emotional.

Scores in the Good Marriage factor (2) were skewed even farther to the right with very high levels of agreement. This showed that participants, in general, agreed with statements about

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what makes a good marriage, including commitment, love and care, emotional support, and communication.

Factor 3 (Violence in Society) showed scores that varied from as low as 2.44 on violence in society, suggesting low levels of agreement, to 7.12-7.44 on violence in TV and movies and violence in video games, respectively, suggesting higher levels of agreement towards these items. Interestingly, participants were accepting of violence in components of society such as TV, movies, video games, and sports but this approval was not reflected in their responses regarding violence in society as a whole. It is possible, given these results, that participants did not perceive the violence seen in TV, movies, and video games as a reflection of violence seen in society as a whole.

Items in the Violence in Relationships factor (4), on the other hand, had extremely low levels of disagreements. Showing promising results that participants did not agree with statements that were accepting of physical or sexual violence in relationships.

Scores varied but were still all skewed towards the right in the Competition and Risk factor (5) with the highest levels of agreement toward competition in society (8.24) and the lowest levels of agreement towards self-reported risk-seeking (6.50). These results show that participants agreed that competition and risk-seeking are important in society. Additionally, they agreed that they considered themselves competitive and risk-seeking.

Scores skewed far to the right in the Bad Marriage factor (6) showing high levels of agreement with statements about what made a bad marriage, including infidelity, selfishness, dishonesty, and lack of communication.

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Items in the Infidelity factor (7) skewed far to the left showing low levels of agreement with statements supporting infidelity.

Score frequencies were very centralized in the Males Versus Females factor (8) showing neutral perceptions of the differences between men and women. This shows that participants did not agree or disagree with statements that men take more risks than women, are more violent than women, nor that men want to have sex more than women.

The remaining two Likert scale items in factor 9 both skewed to the left showing higher levels of agreement regarding statements on the physical nature of a "hookup" and the statement that "a good marriage consists of selflessness."

The numeric response items included the age of sexual debut which averaged 17.25 years old ± 2.59 years. The average number of sexual partners for participants was 5.22 ± 9.50 people while the average number of sexual partners considered to be "a lot" or "many" was three times that at 15.64 ± 54.79 individuals.

Table 4: Item Frequency Distributions

Factor	Item		Mean Score
1	E9	I feel that abuse is a physical act	8.09 ± 2.48
	E10	I feel that abuse is a verbal act	8.18 ± 2.26
	E11	I feel that abuse is an emotional act	8.32 ± 2.20
2	G1	A good marriage consists of commitment	9.56 ± 1.07
	G2	A good marriage consists of love and care	9.60 ± 0.93
	G4	A good marriage consists of emotional support	9.58 ± 0.95
	G14	Lack of communication can lead to a bad marriage	9.39 ± 1.23
3	E4	I feel that violence in sports is acceptable	4.13 ± 3.29
	E5	I feel that violence in TV and movies is acceptable	7.12 ± 2.70
	E6	I feel that violence in video games is acceptable	7.44 ± 2.49
	E7	I feel that violence in society is acceptable	2.44 ± 2.61
4	E2	I feel that physical force is sometimes necessary in an argument with one's significant other	0.58 ± 1.37
	E3	Being more violent makes me more of a man	0.67 ± 1.50

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	E8	I feel that violence in relationships is acceptable	0.37 ± 1.10
	F10	I feel that nonconsensual sex is acceptable	0.72 ± 2.10
5	**D1**	Competition is generally a good thing to have in society	8.24 ± 1.77
	D2	I consider myself to be a competitive person	7.36 ± 2.42
	D3	I consider myself to be a person who takes risks	6.50 ± 2.39
	D5	I feel that it is important for individuals to take risks to be successful	7.28 ± 2.17
6	**G8**	Infidelity can lead to a bad marriage	9.42 ± 1.48
	G11	Selfishness can lead to a bad marriage	8.45 ± 1.97
	G13	Dishonesty can lead to a bad marriage	9.26 ± 1.42
	G14	Lack of communication can lead to a bad marriage	9.39 ± 1.23
7	**-F12**	It is important to be faithful in a romantic relationship (inverse scoring)	0.96 ± 2.00
	F13	I believe that cheating is acceptable in some situations	1.31 ± 2.25
	-G8	Infidelity can lead to a bad marriage (inverse scoring)	0.58 ± 1.48
8	**D4**	Males take more risks than females	5.87 ± 2.91
	E1	Males are more violent than females	5.98 ± 2.72
	F11	I feel that men want to have sex more than women do	4.57 ± 3.32
9	**F2**	A “hookup” is a purely physical encounter	7.14 ± 2.57
	G7	A good marriage consists of selflessness	8.22 ± 2.20
	F23	Indicate your age when you first engaged in sexual intercourse	17.25 ± 2.59
	F24	Indicate the number of sexual partners you consider to be “a lot” or “many”	15.64 ± 54.79
	F25	Indicate how many sexual partners you have had in your lifetime	5.22 ± 9.50

Presence of Sister Means-Testing

Amongst variable averages across the two groups, eight *t*-test results were statistically significant (Table 5). In the first factor component, Abuse, those with sisters had scores 0.378 points higher (p=0.033) than those without, on average. This average factor component was broken down into a 0.434-point increase (p=0.022) for those with sisters regarding abuse being a verbal act and a 0.318-point increase (p=0.065) for those with sisters regarding abuse being an emotional act. These results show that those with sisters agree more with statements

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acknowledging that abuse is a verbal and emotional act, meaning they perceive abuse as consisting of these facets more so than those without sisters.

Statistically significant differences were also seen between sister ⊖ and sister ⊕ groups for the good marriage (-0.316, p=0.041) and bad marriage (-0.322, p=0.002) factor components. Differences in these components imply that those with sisters had a better understanding of what makes a good marriage versus what makes a bad marriage than those without sisters.

The Infidelity factor showed a 0.314-point decrease (p=0.013) in agreement with statements supporting infidelity between the sister ⊖ and sister ⊕ groups. From this, it can be implied that those with sisters are less accepting of infidelity than those without.

In the last factor component, those with sisters showed an average of 0.336-point increase (p=0.025) than those without, showing that they agreed that a "hookup" was a purely physical encounter and that selflessness could lead to a good marriage more than those without sisters.

Finally, on average those with sisters had a 0.516-year earlier sexual debut than those without; possibly because they were more comfortable around females than their peers without sisters. The other component averages and individual non-directional items did not show statistically significant differences between groups.

Table 5: Significant *t*-test results between sister ⊖ and sister ⊕

Factor Component	**Sister ⊖** n=221	**Sister ⊕** n=216	**Mean Difference** (⊖ – ⊕)	**Significance**
(1) Abuse	8.009	8.387	-0.378	0.033*
E10: I feel that abuse is a verbal act	8.970	9.400	-0.434	0.022*
E11: I feel that abuse is an emotional act	9.160	9.480	-0.318	0.065*
(2) Good Marriage	9.473	9.609	-0.136	0.041*

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(6) Bad Marriage	8.966	9.287	-0.322	0.002**
(7) Infidelity	1.104	0.790	0.314	0.013*
(9) Hookup/Selfless	7.516	7.852	-0.336	0.025*
F23: Age of sexual debut	17.50	16.98	0.516	0.036*

Sibling Gender Composition Means-Testing

An ANOVA test, followed by Tukey post-hoc, between all four participant groups (single child, all brothers, all sisters, and mixed gender) provided six statistically significant results (Table 6). Similarly to the *t*-test results, a difference was seen in the Abuse factor between the mixed genders group and the all brothers group (0.840, p=0.025). The difference in the ANOVA results was even larger and also seen across both the aggregate Abuse factor and the individual items regarding abuse being a physical and verbal act. Interestingly, this varies from the results seen in the *t*-test in that results were seen for the physical abuse item and not in the emotional abuse item, suggesting that those with mixed gendered siblings agreed more that abuse could be a physical and verbal act than those with all brothers.

Two results were seen in the Violence in Society factor: a 0.952-point (p=0.007) and 0.775-point (p=0.044) decrease in the single child group from those with all brothers and all sisters, respectively. This shows that single children had less accepting views of violence in society as compared to those with all brothers or all sisters.

Participants with mixed gendered siblings answered an average of 0.654-points higher (p=0.040) in favor of "hookups" being a physical act and in agreement that selflessness can lead to a good marriage. Although it is unclear the relationship between these two items, what can be said is that those with mixed gendered siblings recognized "hookups" as a physical encounter

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and also recognize the importance of selflessness in marriage compared to those with all brothers.

Table 6: Tukey post-hoc results between the single child comparison, ♂, ♀, and ⚥ groups

Factor Component	Between Groups	Mean Difference	Significance
(1) Abuse	Mixed genders / All brothers	0.840 (8.69 / 7.85)	0.025*
E9: Abuse Physical	Mixed genders / All brothers	0.890 (9.67 / 8.78)	0.046*
E10: Abuse Verbal	Mixed genders / All brothers	0.895 (9.65 / 8.75)	0.021*
(3) Society Violence	All brothers / Single child	0.952 (5.58 / 4.63)	0.007**
(3) Society Violence	All sisters / Single child	0.775 (5.40 / 4.63)	0.044*
(9) Hookup/Selfless	Mixed genders / All brothers	0.654 (8.06 / 7.41)	0.040*

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DISCUSSION

The aim of this study was to test for a possible association between sibling gender and YAAM perceptions of Competition and Risk, Violence, Relationships, and Marriage as assessed by the YAAMHBIS. These preliminary results show some statistically significant associations between sibling composition and certain variables within Abuse, Marriage, Infidelity, Violence, and age of sexual debut.

Summary of Results

Regardless of sibling group assignment, components featuring Abuse (1), Good Marriages (2), Competition and Risk (5), Bad Marriages (6), and Hookups and Selflessness (9) all had scores skewed to the right, meaning higher agreements in these areas. These results show that on average, the YAAMs in this sample acknowledged different facets of abuse, understood the components of a good and bad marriage, and were more accepting of competition and risk. On the other hand, Violence in Relationships and Infidelity items were all skewed far to the left with low scores indicating that the participants were not accepting of violence in relationships, including nonconsensual sex, nor were they accepting of infidelity in relationships. In the middle of these, the Men Versus Women and Violence in Society components had neutral scores or averaged out to a neutral point, respectively. Both of these results bear interesting ramifications. Neutral scores in the Men Versus Women factor show that these participants do not subscribe to traditional societal norms that men take more risks than women, are more violent than women, or that men want more sex than women. While the Violence in Society scores indicate that participants might not view the violence in TV, movies, and video games to be the same as violence in society as a whole.

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Means testing results showed an increased acknowledgment of abuse as a verbal and emotional act amongst those participants with sisters than those without. There were many differences seen between sister ⊖ and sister ⊕ groups in romantic and sexual perceptions as well. Those with sisters had an increased knowledge of what constitutes a good and bad marriage and were also less accepting of infidelity than those without sisters. In addition, those in the sister ⊕ group agreed more that a "hookup" is a purely physical encounter and that selflessness could lead to a good marriage compared to those in the sister ⊖ group. It is also important to note that those with sisters had an earlier age of sexual debut than those without, possibly supporting earlier statements that the presence of sisters during childhood can increase comfortability and communication skills with women later in life.

Similar results were seen from ANOVA tests in the factor components on Abuse and Hookups/Selflessness although in these tests we could see that those came from differences between the mixed genders group and the all brothers group specifically. New results from the ANOVA tests showed that both those with all brothers and those with all sisters agreed more with statements supporting violence in society than single children.

Limitations & Future Implications

Limitations. Due to the convenience sampling techniques used in acquiring the YAAMHBIS data, the ability to generalize study findings was diminished. However, with the use of national partners and soliciting a racially and ethnically diverse representative population, an attempt was made to mitigate this external validity limitation. Further, as a 199-item instrument, there is a high possibility for participant fatigue, affecting data quality, especially in later sections. The possible error introduced from participant fatigue on this 199-item instrument

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was controlled for by using data in sections that were not at the end of the questionnaire. Also, in its entirety, the YAAMHBIS could have had additional variables weighing in on the measured components that were not accounted for in the factor analysis since the dimensional reduction was only performed on select items.

Univariate analyses showed that many participants were single, which could have affected results, specifically in regard to perceptions of women and relationships. This sample is also more highly educated than the general population which could affect perceptions of the variables examined in this study. As an analytic limitation, many variables could have been excluded by bivariate analyses. Important variables that were not included in this analysis were cultural norms and other elements of family dynamics, such as parental presence, single parents, remarriage, and sibling birth order. The female effect of a single mother could have been influential to YAAM development in similar ways to the presence of a sister. Additionally, the effects of older siblings could be different than those of younger siblings.

Future Implications. This analysis provides information regarding variances in perceptions that could be associated with violent, romantic, sexual, and competitive behaviors. These differences were associated with the gender composition of the YAAM sample's siblings. This knowledge could be expanded upon in future studies to assess the possibility of sibling gender as a risk factor for certain social, health, and risk-seeking behaviors. Specifically, insight in YAAM perceptions of women could indicate tendencies for certain behaviors towards women and relationships. Using this novel instrument to analyze correlations between childhood household composition and health behaviors later in life opens the door for many future research possibilities. Further analysis into YAAM health behavior correlations with solely female

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guardian households and households with a male guardian is of interest, as well as a more in-depth sibling analysis looking at birth order and the number of siblings.

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APPENDIX: YAAMHBIS

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Young Adult and Adolescent Males Health Behavior Indicators Scale

This questionnaire asks you to respond to statements about your health, wellness, and other general topics. You will be asked the extent you agree or disagree with certain statements and respond to other questions. There are no right or wrong answers. This survey should take about 10 to 20 minutes to complete.

Section A: Demographic Information

1. *Please list your age in years* (e.g. 15): _____

2. *Please indicate the gender you were born as by choosing one of the following options: (select one)*

   Male Female

3. *Please indicate the gender you currently consider yourself to be by choosing one of the following options: (select one)*

   Male Female Other (*specify*):_____

4. *In which country do you currently reside? (please specify)* _____

   a. *Which state do you currently reside? (please specify)* _____

5. *What is the highest degree or level of education that you have completed at this time?: (select one)*

Elementary School (K to 5th Grade)	Some College, No Degree
Middle or Junior High School (6th to 8th grades)	Trade, Technical, or Vocational Training School Graduate
Freshman in High School	Associate's Degree
Sophomore in High School	Bachelor's Degree
Junior in High School	Master's Degree
Senior in High School	Professional Degree
High School Graduate (diploma or GED)	Doctorate Degree

6. *Major/Specialization (if in school): (if applicable, please specify)* _____

7. *Please list your current GPA if currently enrolled in school (if applicable, please specify):* _____

8. *In school, which of the following do/did you receive? (select all that apply)*

   Free Lunch Reduced Lunch Neither Free nor Reduced Lunch Primarily brought my own

9. *What is the highest reading level you attained in K-12, such as measured by a state-mandated test like the Florida Standards Assessment FSA (formerly known as the FCAT) or elsewhere? (select one)*

   1 2 3 4 5 Unsure

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Young Adult and Adolescent Males Health Behavior Indicators Scale

10. *Race/Ethnicity: (select one)*

Caucasian/White African American/Black Asian/Pacific Islander

American Indian/Alaskan Native Other: *(specify)*_____

11. *Do you identify yourself as Hispanic/Latino? (select one)* YES NO

12. *Do you consider yourself a spiritual person? (select one)* YES NO

a. *If yes, do you identify with an organized religion? (select one)* YES NO

i. *If yes, please specify:* _____

b. *How many times per week do you pray / meditate?* _____

13. *Who resided in your household as a child/adolescent? (select all that apply)*

Mom Dad Grandparent(s) Foster Family Other: _____

Brother(s) *if yes, how many?* _____ Sister(s) *if yes, how many?* _____

14. *What is your relationship status? (select one)*

Single Unmarried Relationship Cohabitation (Unmarried live-in relationship)

Registered Domestic Partnership Married Divorced Separated Widower

15. *What is your employment status? (select all that apply)*

Part Time Full Time Unemployed & Looking for work Unemployed & Not Looking for work

Student Retired Unable to work Homemaker Other: _____

16. *Have you ever served as a member of the US armed services or any other country's military?* YES NO

a. *Are you a current member of any armed services? (select one)* YES NO

b. *How many years did you/have you served? (please specify):* _____

c. *What was your starting rank? (please specify):* _____

d. *What was your ending/current rank? (please specify):* _____

e. *In which branch did you serve? (select all that apply):*

Army Navy Air Force Marine Corps Coast Guard

Other: *(specify)* _____

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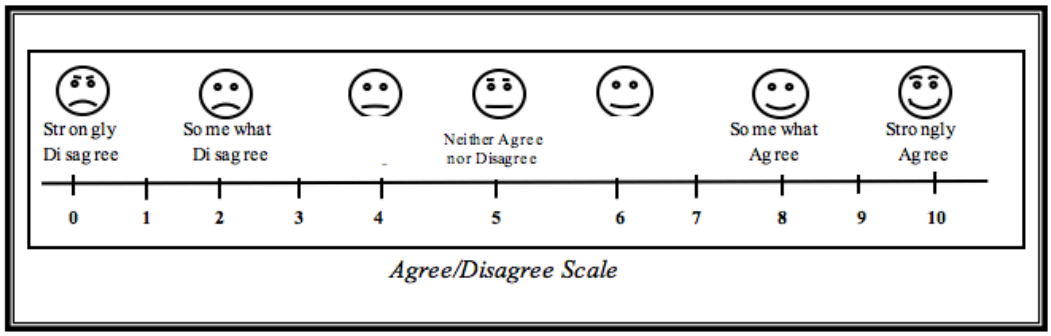
Young Adult and Adolescent Males Health Behavior Indicators Scale

Below are some statements that you may agree or disagree with. Rate (0 to 10) how much you DISAGREE or AGREE with statements #1 to #14 with "0" representing "strongly disagree", "5" representing "neither agree nor disagree", and "10" representing "strongly agree." Please respond to #15 according to the question's direction.



Agree/Disagree Scale

Section B: Being a Man

1. *A man is different than a young man* ..... _____
2. *I consider myself a young man* ..... _____
3. *I consider myself a man* ..... _____
4. *A young man is a male who is not yet financially successful* ..... _____
5. *A young man is a male who is not yet successful in building a family* ..... _____
6. *A young man is a male who is still in the process of maturing* ..... _____
7. *Being financially successful makes me a man* ..... _____
8. *Being able to take care of my family makes me a man* ..... _____
9. *A man is someone who has responsibilities* ..... _____
10. *My opinions of what a man is are similar to what society thinks a man is* ..... _____
11. *My opinions of what a man is are similar to what my family thinks a man is* ..... _____
12. *Having a family (i.e. partner/spouse, children) makes someone a man* ..... _____
13. *Having a career makes someone a man* ..... _____
14. *Having financial stability makes someone a man* ..... _____

15. *Please indicate in years what age a male becomes a man (please specify):* _____

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Young Adult and Adolescent Males Health Behavior Indicators Scale

Below are some statements that you may agree or disagree with. Rate (0 to 10) how much you DISAGREE or AGREE with statements #1 to #24 with "0" representing "strongly disagree," "5" representing "neither agree nor disagree," and "10" representing "strongly agree." Please respond to #'s 25-29 according to the questions' direction.

Section C: Health and Wellness

1. *The term "healthy" means being physically, mentally, and emotionally balanced* ..... _____
2. *I consider myself to be a healthy person* ..... _____
3. *I think I can be a healthier person* ..... _____
4. *Having a healthy diet is important for me to achieve wellness* ..... _____
5. *Exercising is important to overall achieving wellness* ..... _____
6. *Mental health is important to achieving overall wellness* ..... _____
7. *Spiritual health is important to achieving overall wellness* ..... _____
8. *Physical health is important to achieving overall wellness* ..... _____
9. *I think it is important to always be mindful of my health* ..... _____
10. *For someone my age, drinking alcohol daily is an okay thing to do* ..... _____
11. *For someone my age, using tobacco or hookah is an okay thing to do* ..... _____
12. *Using cocaine or crack is something I consider okay for me to do* ..... _____
13. *Using heroin is something I consider okay for me to do* ..... _____
14. *Using Molly (i.e. ecstasy, MDMA) is something I consider okay for me to do* ..... _____
15. *Using marijuana is something I consider okay for me to do* ..... _____
16. *I feel sad throughout much of the day* ..... _____
17. *I feel happy throughout much of the day* ..... _____
18. *I feel nervous throughout much of the day* ..... _____
19. *I feel depressed throughout much of the day* ..... _____
20. *I often feel afraid* ..... _____

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Young Adult and Adolescent Males Health Behavior Indicators Scale

21. *Generally, I feel satisfied with myself* ..... _____

22. *Generally, I feel excited about life* ..... _____

23. *I feel motivated throughout much of the day* ..... _____

24. *I feel tired throughout much of the day* ..... _____

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25. *Please indicate the average number of times you exercise per week (specify):* _____

26. *Please indicate the average amount of time you spend exercising at one point in time (i.e. 30 minutes):* _____

27. *Do you drink alcohol? (select one)* YES NO

    a. *When I drink alcohol, I drink to get drunk* ..... _____

    b. *When I drink alcohol, I drink to be sociable* ..... _____

    c. *How often do you drink alcohol? (select one)*

       Daily Almost Daily 2-3 Times per week

       Once per week Monthly Occasional

    d. *If/When you drink alcohol, please indicate the average number of alcoholic drinks you consume in a 2-hour period of time (one drink is a 12-ounce beer, a 4-ounce glass of wine, or 1.5 ounces [one shot] of liquor):* _____

28. *Do you regularly take prescription medication prescribed to you by a physician?* YES NO

29. *Please indicate which drugs you use/have used (select all that apply):*

    Alcohol Tobacco/Hookah Marijuana Molly/MDMA/Ecstacy

    Cocaine/Crack Heroin Unprescribed prescription drugs

    Other: _____

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Young Adult and Adolescent Males Health Behavior Indicators Scale

Below are some statements that you may agree or disagree with. Rate (0 to 10) how much you DISAGREE or AGREE with statements #1 to #5 with "0" representing "strongly disagree," "5" representing "neither agree nor disagree," and "10" representing "strongly agree."

Section D: Competition and Risk

1. *Competition is generally a good thing to have in society* ..... _____
2. *I consider myself to be a competitive person* ..... _____
3. *I consider myself to be a person who takes risks* ..... _____
4. *Men take more risks than women* ..... _____
5. *I feel that it is important for individuals to take risks in order to be successful* ..... _____

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Young Adult and Adolescent Males Health Behavior Indicators Scale

Below are some statements that you may agree or disagree with. Rate (0 to 10) how much you DISAGREE or AGREE with statements #1 to #11 with "0" representing "strongly disagree," "5" representing "neither agree nor disagree," and "10" representing "strongly agree."

Section E: Violence

1. *Males are more violent than females* ..... _____
2. *I feel that physical force is sometimes necessary in an argument with one's significant other* ..... _____
3. *Being more violent makes me manlier* ..... _____
4. *I feel that violence in sports is acceptable* ..... _____
5. *I feel that violence in TV and movies is acceptable* ..... _____
6. *I feel that violence in video games is acceptable* ..... _____
7. *I feel that violence in society is acceptable* ..... _____
8. *I feel that violence in relationships is acceptable* ..... _____
9. *I feel that abuse is a physical act* ..... _____
10. *I feel that abuse is a verbal act* ..... _____
11. *I feel that abuse is an emotional act* ..... _____

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Young Adult and Adolescent Males Health Behavior Indicators Scale

Below are some statements that you may agree or disagree with. Rate (0 to 10) how much you DISAGREE or AGREE with statements #2 to #13 with "0" representing "strongly disagree," "5" representing "neither agree nor disagree," and "10" representing "strongly agree." Please respond to #'s 1 and 14-24 according to the questions' direction.

Section F: Romantic Relationships

1. *To me, a "hookup" is (select all that apply):*

   Kissing/"Making Out" *A "one night stand"* *A consistent "booty call"*

   Other (please specify): _____

2. *A "hookup" is a purely physical encounter* ..... _____

3. *A "hookup" is a purely emotional encounter* ..... _____

4. *Engaging in sexual relations (**here forward defined as vaginal, anal, and/or oral sex**) during early teenage years (12-15 years old) is acceptable* ..... _____

5. *Engaging in sexual relations during late teenage years (16-19 years old) is acceptable*_____

6. *I am influenced by my peers to have sex or engage in sexual relations* ..... _____

7. *I am influenced by my hormones to have sex or engage in sexual relations* ..... _____

8. *I am influenced by society to have sex or engage in sexual relations* ..... _____

9. *I am influenced by the media to have sex or engage in sexual relations* ..... _____

10. *I feel that nonconsensual sex is acceptable* ..... _____

11. *I feel that men want to have sex more than women do* ..... _____

12. *It is important to be faithful in a romantic relationship* ..... _____

13. *I believe that cheating is acceptable in some situations* ..... _____

---

14. *Please indicate your sexual orientation (select one):*

    Heterosexual/Straight Homosexual/Gay/Lesbian Bisexual Other (specify): _____

15. *Have you given penetrative vaginal sexual intercourse? (select one)* YES NO

16. *Have you ever given penetrative anal sexual intercourse? (select one)* YES NO

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17. Have you received penetrative anal sexual intercourse? (select one) YES NO

18. Have you ever performed oral sex? (select one) YES NO

19. Have you ever received oral sex? (select one) YES NO

20. Please indicate your age when you engaged in sexual intercourse for the first time: _____

21. Please indicate the number of sexual partners you consider to be "a lot" or "many": _____

22. Please indicate how many sexual partners you have had in your lifetime: _____

23. At this point in time which gender(s) do you have sexual relations with:

Male Female Other (specific): _____

24. Please indicate which genders you have ever had sexual relations with (select all that apply)

Male Female Other (specify): _____

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Young Adult and Adolescent Males Health Behavior Indicators Scale

Below are some statements that you may agree or disagree with. Rate (0 to 10) how much you DISAGREE or AGREE with statements #1 to #14 with "0" representing "strongly disagree," "5" representing "neither agree nor disagree," and "10" representing "strongly agree." Please respond to #15 according to the question's direction.

Section G: Family & Fatherhood

1. *A good marriage consists of commitment* ..... _____
2. *A good marriage consists of love and care* ..... _____
3. *A good marriage consists of frequent sexual activity* ..... _____
4. *A good marriage consists of emotional support* ..... _____
5. *A good marriage consists of overall financial stability* ..... _____
6. *A good marriage consists of having established careers* ..... _____
7. *A good marriage consists of selflessness* ..... _____
8. *Infidelity can lead to a bad marriage* ..... _____
9. *Overall financial instability can lead to a bad marriage* ..... _____
10. *Unequal financial contribution between spouses can lead to a bad marriage* ..... _____
11. *Selfishness can lead to a bad marriage*..... _____
12. *Infrequent sexual activity can lead to a bad marriage* ..... _____
13. *Dishonesty can lead to a bad marriage* ..... _____
14. *Lack of communication can lead to a bad marriage* ..... _____

15. *Do you plan to get married?*

☐ Yes ☐ No ☐ Unsure ☐ Already Married

If yes or unsure, please rate (0 to 10) how much you DISAGREE or AGREE with statements #16 to #21 with "0" representing "strongly disagree," "5" representing "neither agree nor disagree," and "10" representing "strongly agree."

16. *I would want to get married to start a family* ..... _____
17. *I would want to get married to feel loved* ..... _____
18. *I would want to get married to have support* ..... _____
19. *I would want to get married to have a companion* ..... _____

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20. I would want to get married to commit to my partner ..... _____

21. I would want to get married for legal and/or government reasons ..... _____

Below are some statements that you may agree or disagree with. Rate (0 to 10) how much you DISAGREE or AGREE with statements #22 to #28 with "0" representing "strongly disagree," "5" representing "neither agree nor disagree," and "10" representing "strongly agree." Please respond to #29-30 according to the questions' direction.

22. A good father is a financial provider..... _____

23. A good father is present ..... _____

24. A good father is emotionally and mentally supportive ..... _____

25. A good father is loving and caring ..... _____

26. A bad father is not present ..... _____

27. A bad father is emotionally abusive ..... _____

28. A bad father is physically abusive ..... _____

29. Do you have children?

☐ Yes

☐ No

a) *If yes, how many?* _____

b) *Are you still romantically involved with your child(ren)'s mother? (select all that apply)*

☐ Yes *If yes, how many mothers:* _____

☐ No *If no, how many mothers:* _____

c) *If you have children, are you involved in your child(ren)'s life? (select all that apply)*

☐ Yes *If yes, please describe the extent of your involvement:* _____

☐ No *If no, how many children:* _____

30. If no children, do you plan to have kids?

☐ Yes

☐ No

☐ Unsure

a) *If yes, how many?* _____

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Young Adult and Adolescent Males Health Behavior Indicators Scale

Below are some statements that you may agree or disagree with. Rate (0 to 10) how much you DISAGREE or AGREE with statements #1 to #5 with "0" representing "strongly disagree," "5" representing "neither agree nor disagree," and "10" representing "strongly agree." Please respond to #6-7 according to the question's direction.

Section H: Friendship

1. *Trust is an important factor in friendship* ..... _____
2. *I feel that having friends is important to my health and wellness* ..... _____
3. *feel that if a person does not have friends, there is something wrong with him/her* ... _____
4. *I have a lot of friends* ..... _____
5. *My friends heavily influence the decisions I make* ..... _____

6. *Please indicate the number of friends that you have:* _____
7. *Where do you feel the majority of your friends come from? (select all that apply)*

School Family Church Work Other: _____

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Young Adult and Adolescent Males Health Behavior Indicators Scale

Below are some statements that you may agree or disagree with. Rate (0 to 10) how much you DISAGREE or AGREE with statements #1 to #14 with "0" representing "strongly disagree," "5" representing "neither agree nor disagree," and "10" representing "strongly agree."

Section I: Success and Values

1. *I consider myself to be a successful person* ..... _____
2. *I believe that a person is successful if he/she accomplishes or achieves all of his/her life goals* ..... _____
3. *I believe that a person is successful if he/she accomplishes or achieves some of his/her life goals* ..... _____
4. *I feel that I have the ability to achieve the level of success I want to achieve* ..... _____
5. *I respect successful people* ..... _____
6. *I believe women can be and are equally as successful as men in today's society* ..... _____
7. *I respect my elders, including my parents or guardians* ..... _____
8. *I respect my family* ..... _____
9. *I respect my teachers/professors* ..... _____
10. *I respect the police and other law enforcement agents* ..... _____
11. *I respect other authority figures such as my boss/supervisor* ..... _____
12. *I expect others to respect me* ..... _____
13. *I believe women are generally less successful than men* ..... _____
14. *I am passionate about my values and beliefs (i.e. family, religion, etc.)* ..... _____

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Young Adult and Adolescent Males Health Behavior Indicators Scale

Below are some statements that you may agree or disagree with. Rate (0 to 10) how much you DISAGREE or AGREE with the statements contained in #1 to #6 with "0" representing "strongly disagree," "5" representing "neither agree nor disagree," and "10" representing "strongly agree."

Section J: Communication

1. I feel comfortable communicating verbally with:

my friends ..... _____

my parent(s) or guardian(s) ..... _____

police officers ..... _____

authority figures such as my boss/supervisor..... _____

my teacher(s) or professor(s) ..... _____

2. When they do not understand what I have said, I feel comfortable with clarifying myself with:

my friends ..... _____

my parent(s) or guardian(s) ..... _____

police officers ..... _____

authority figures such as my boss/supervisor..... _____

my teacher(s) or professor(s) ..... _____

*3. I feel that I have effective **non-verbal** communication skills (body language, facial expressions, etc.) when I interact with or speak to:*

my friends ..... _____

my parent(s) or guardian(s) ..... _____

police officers ..... _____

authority figures such as my boss/supervisor..... _____

my teacher(s) or professor(s) ..... _____

*3. I feel that I have effective **verbal** communication skills when I interact with or speak to:*

my friends ..... _____

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my parent(s) or guardian(s) ..... _____

police officers ..... _____

authority figures such as my boss/supervisor..... _____

my teacher(s) or professor(s) ..... _____

*4. I feel comfortable talking to my **friends** about:*

relationships ..... _____

sex ..... _____

society/current events (politics, media, etc)..... _____

school ..... _____

*5. I feel comfortable talking to my **parent(s) or guardian(s)** about:*

relationships ..... _____

sex ..... _____

society/current events (politics, media, etc)..... _____

school ..... _____

*6. I feel comfortable talking to **authority figures** about:*

relationships ..... _____

sex ..... _____

society/current events (politics, media, etc)..... _____

school ..... _____

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Section K: Wrap up

If you have additional comments or feedback about any of the questions in the previous sections, please inform us in the space below:

Thank you for taking our survey. If you have any questions or concerns, please contact the research team at (407) 823-3888 or email at BHRG@ucf.edu.

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