Spring 2016

The Effect of Birth Order on Attitudes Toward Altruism

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An Honors Thesis
Submitted for partial fulfillment of the requirements
for graduation with honors in Sociology
from Hamline University

April 26, 2016

ABSTRACT

Birth order is an extensively studied and contested concept in social science research. It has been used to examine topics such as personality (Curtis and Donald, 1993; Harris, 2000; Krueger et al., 2000), risk-taking behavior (Krause et al., 2014; Piliavin and Charng, 1990), context-specific learning (Harris, 2000), relationships (Eckstein et al., 2010; Harris, 2000; Kalliopuska, 1984; Manaster, 1977; Maner and Gaillot, 2007; Radley and Kennedy, 1995; Salmon, 2003; Winterich et al, 2009), narcissism (Curtis and Donald, 1993), and prosociality (Kalliopuska, 1984; Krueger et al., 2000; Kurzban et al. 2015; Maner and Gaillot, 2007; Piliavin and Charng, 1990; Radley and Kennedy, 1995; Salmon, 2003; Simmons, 1991; Warneken and Tomasello, 2009; Winterich et al, 2009). While there has been a considerable amount of research done on birth order, there has been little to no research that has examined the influence of birth order on altruistic attitudes. Previous research on prosocial behavior has shown that middle borns are likely to express less positive attitudes toward family than first borns or last borns (Salmon, 2003), and oldest children are more likely to express helping behavior toward kin than nonkin (Maner and Gailliot, 2007). The purpose of this study was to investigate the effect of birth order on a person's attitudes towards altruism. Analyses evaluated different factors in altruistic attitudes, such as risk taking, family size, gender, and rewards. Results indicated that birth order does have an effect on certain attitude measures of altruism and as well as effects for race and gender.

INTRODUCTION

Humans have long possessed a want and need to help others through prosocial and altruistic acts, whether that be loaning money to a friend, helping a neighbor rescue their cat from a tree, donating to a homeless shelter, or helping a younger sibling with their homework. In these situations, who is the most likely to help? Little is known about how one's birth order might shape their altruistic actions and attitudes.

While many scholars differ in their definition, altruism is defined here as "behavior that risks our resources, including our own physical safety, to benefit others" (Olson and Hergenhahn, 2011, p. 379). Essentially, it is a voluntary act that one performs in order to increase another's welfare with no external reward or benefit to the self (Simmons, 1991). Altruism is a topic that has been deeply examined by social scientists in multiple disciplines, including evolutionary psychology, sociobiology, social psychology, and sociology. Simmons, a sociologist, argues from a structural functionalist perspective and says that altruism is one process that helps glue society together and without it society would not function as it should (1991). Altruism is not intended to represent the individual and hold selfish motives, but it exists to help others and society as a whole. For some time, researchers have discussed the altruism-egoism controversy which argues whether people are actually capable of altruistic behavior or whether all helping behavior is egoistic and self-serving (Simmons, 1991). Other researchers argue that there has been a "paradigm shift" in that prosocial behavior no longer has egoistic motives and that the altruistic impulse does truly exist (Lipscomb et al., 1982, 1985; Rushton, 1980). One of the main factors to altruistic behavior lies within the motivations to perform the helping acts and the type of relationship that exists between the provider and the

recipient of the help, whether they are a member of the helpers in-group or out-group (Maner and Gailliot, 2007; Radley and Kennedy, 1995; Winterich et al., 2009). So what type of people are likely to act altruistically?

There has been considerable data gathered concerning birth order research, however, conflicting conclusions have resulted in the need to further investigate the effects of birth order. Alfred Adler was one of the first theorists to incorporate birth order into his work (Eckstein et al., 2010; Krause et al, 2014; Curtis and Cowell, 1993; Manaster, 1977). Adler found that parents and members of society can impose beliefs about birth-order characterics onto children, which can affect expectations, rearing practices, and ultimately a child's outcomes in life (Eckstein et al., 2010). Adler also argues that before we can judge a person, we must understand the situation in which they grew up and the position they hold in terms of their family structure (Manaster, 1977). There are many factors that may influence a person's birth order position, such as gender, death or impairment of a sibling, family size and density, blended families, large age gap between siblings, differences in familial and cultural norms, and sex of siblings (Eckstein et al., 2010; Manaster, 1977). Eckstein et al. created a representative study of ordinal and psychological birth order research which resulted in overwhelming support in general differences in birth order characteristics, such as first born children having the highest academic/intellectual success, being high achievers and highly motivated, and being the most likely to be the leader. Middle children had characteristics of being social, having success in team sports, having feelings of not belonging, and have the fewest "acting out" problems. Youngest children are the most rebellious, most empathic, and have the highest amount of social interest/agreeableness. Only children, similar to oldest children, have characteristics of achievements/intelligence, need for

achievement, and were most likely to be selfish (2010). Although some researchers maintain that family size and altruistic behavior are unrelated, others state that growing up in a large family promotes generosity (Kalliopuska, 1984).

Little research up to this point has looked into how birth order plays a role in altruistic attitudes and behavior. Some research has examined how a person's birth order determines who they are likely to display prosocial behavior toward, whether that be kin or nonkin (Salmon, 2003). This research study looked at the effect of birth order on altruistic attitudes. The value of birth order and altruism research is to investigate who is more likely and less likely to have positive feelings toward prosocial behavior dependent on their ordinal position. This work would further add to previous research done on empathy and birth order (Kalliopuska, 1984) as well as the relationship between risk taking tendencies and altruistic attitudes.

Previous research might suggest that birth order is in fact associated with the level of altruistic behavior a person displays. Therefore, I performed this study to confirm the previous research that says growing up in a large family encourages generosity and prosocial behavior (Sawyer, 1966). I am also expanding upon the research to investigate if youngest children are more likely to take a risk and report altruistic attitudes (Eckstein et al.,2010; Krause et al., 2014).

LITERATURE REVIEW

Birth order has been a topic of discussion for social scientists for a long time. Psychologist Alfred Adler was one of the first theorists to incorporate birth order in his work in 1918 (Eckstein et al., 2010; Manaster, 1977). He believed that "before we can judge a human being we must know the situation in which he grew up. An important moment is the position

which a child occupied in his family constellation" (Adler, 1927, p. 149). Adler contended that each child is treated differently within a family depending on their birth order. This differential treatment is what influences the child's worldview and their life goals and lifestyle (Olson and Hergenhahn, 2011). Adler also found that parents and members of society can impose beliefs about birth-order characterics onto children, which can affect expectations, rearing practices, and ultimately a child's outcomes in life (1956c).

Adler concentrated much of his birth order research in the psychology field and focused on the first born, second born, youngest, and the only child (Olson and Hergenhahn, 2011). The first born is the focus of attention by the parents until the next child is born. The child then becomes less of a focus as the new child receives the focus of the parents and the first born child must now fight for the attention they lost (Olson and Hergenhahn, 2011). The second born child then has to be extremely ambitious because they are trying to catch up, or pass, their older sibling (Olson and Hergenhahn, 2011). Of all the birth orders, Adler saw the second borns as being the most fortunate because, according to Adler, the second born child behaves as if in a race and if someone were a step or two ahead, they must rush to get ahead again (1956c). Not only do second borns have the opportunity to observe and profit from mistakes the first born children make, but they also can learn compassion for others because of their second-place slot (Eckstein et al., 2010). Next, Adler saw the youngest child as being in the second-worst position after the first born child (Olson and Hergenhahn, 2011). He attributed this to how the family treats and spoils the youngest children, and although youngest children are ambitious, they are also lazy and spoiled (1958). Lastly, the only child is like the first born child who is never dethroned by a sibling (Olson and Hergenhahn, 2011). Adler saw only children as being very

sweet and affectionate, however, the shock comes later in life (e.g., in school) when the only child learns that they can not remain the center of attention (Olson and Hergenhahn, 2011).

To address the various theories in birth-order research, Watts and Engels (1995) hypothesize that Adlerians (those who follow Adler's beliefs) typically consider psychological birth order, whereas non-Adlerians tend to focus on ordinal birth position. Psychological birth order is the way a person sees or perceives their position in their family, while ordinal position is the numerical place of an individual in the order of births in their family (Manaster, 1977; Eckstein et al., 2010). Adler stressed the importance of considering psychological birth order over ordinal birth order by stating, "It is not, of course, the child's number in the order of successive births which influences his character, but the situation into which he is born and the way in which he interprets it," (Eckstein et al., 2010). Birth order terms, such as only, oldest, second born, and youngest, are different terms used by Adlerians and non-Adlerians alike.

Birth order research is multidisciplinary and while much of the research has been done through the psychological lenses, other social scientists, such as sociologists, have examined birth order from other perspectives. For example, unlike psychologists who focus on the individual and their birth order position, sociologists focus on groups of people who hold certain birth order positions and look for common trends amongst them. Social scientists also have used both psychological and ordinal birth-order in their research in various ways. In his book *Born to Rebel*, Sulloway (1996) approaches birth order through an evolutionary psychology perspective and argues that functional birth order, similar to Adler's psychological birth order, has preeminence over biological, or ordinal, birth order (1996). Sulloway looked at birth-order personality factors and found that later born children are generally more adventurous, altruistic,

cooperative, easy going, empathic, open to experience and risk-taking, and sociable, which are all findings that line up closely with Adler's (1996). Herrera et al. took a different approach and focused on the effects of individuals' perceptions of birth-order characteristics and their psychological origins and found that people unconsciously make personal decisions based on their beliefs about birth-order characteristics (2003).

While some researchers argue that family size and altruistic behavior are unrelated, others insist that growing up in a large family promotes generosity (Sawyer, 1966). Researchers have found that children from small families have more self-assurance and initiative and are more willing to act spontaneously and help others who are in emergencies (Staub, 1971). Kalliopuska examined the relationship between empathy and birth order by conducting home interviews with one hundred and ninety-four students, ages nine to twelve years (1984). Empathy differs from altruism in that it is defined as "the capacity to (a) be affected by, and share, the emotional state of another, (b) assess the reasons for the other's state, and (c) identify with the other, adopting his or her perspective" (De Waal, 2008, p. 281). To be clear, empathy is the thoughts and feelings one shares with an individual in a troubled state, while altruism is the act performed for the individual due to their troubled state. According to Kalliopuska's results, there were no significant results, however, her findings were somewhat different from previous studies in that middle born children are prone to empathize more than first borns and later borns are less empathic than first and middle borns (1984). In large families, the youngest children generally receive less parental attention than the oldest siblings because parents often transfer responsibility for caretaking onto the older siblings (Kalliopuska, 1984). While this may be good in teaching empathy and responsibility to older children, Kalliopuska argues that parents in large

families may need to work harder to devote more special time to younger children (Kalliopuska, 1984).

Salmon took a different approach and examines the impact of birth order on relationships and prosocial attitudes depending on if the relationship was with family or non family (friends and sexual partners) (2003). Salmon and Daly (1998) find that middle borns declare themselves to be less close to parents (and more so to friends and siblings) than first borns or last borns and less likely to be actively interested in their family histories or to make kin ties a part of their self-identity (2003). In her study, Salmon explores if middle borns are less affiliated with family and if they are instead specializing in non-kin reciprocal relationships (2003). She asked two hundred and forty-five undergraduate students to complete a questionnaire on family and social relationships and found that middle borns do in fact express less positive attitudes toward family than first borns or last borns (Salmon, 2003).

Birth order can sometimes be difficult to analyze because of the various factors and environmental influences that come into play. For example, a later born child is sometimes in the situation of the oldest child due to the number of years that separate the children from each other. Adler believed that birth order position in not identical to ordinal position because of these factors and influences, and therefore, saw problems in the use of birth order in assessments, therapy, and research that are posed by variations in family size, birth spacing, and sex of siblings (Adler, 1932; Manaster, 1977). Many factors may influence a person's birth order position, such as gender, death or impairment of a sibling, blended families, family size, large age gap between siblings, and differences in familial and cultural norms. (Conley, 2013; Eckstein

et al, 2010; Manaster, 1977; Olson and Hergenhahn, 2011). While examining the research, it is important to consider these factors in terms of psychological birth order, not ordinal.

Regardless of an individual's birth order, risk attitudes and behaviors play a large role in our day to day lives because every decision comes with a risk. Krause et al. (2014) investigate the extent to which risk taking attitudes play a role in overall health behaviors, attitudes, and decision making dependent on a person's birth order. The aim of their study was to quantitatively assess birth order effects on risk perception and actual risk-taking in two independent settings, a university campus and a high risk competition site (Krause et al., 2014). Based on their measurements of risk perception and self-reports of life experiences, they found that birth order is not positively correlated with risk perception (Krause et al., 2014). Risk attitudes and birth order must be considered when working with prosociality and altruism amongst individuals.

Social scientists differ in their definitions of altruism dependent upon their discipline. In general, altruism can be defined as behavior that risks our resources, including our own physical safety, to benefit others (Olson and Hergenhahn, 2011). Sociobiologist Wilson defines altruism as self-destructive behavior performed for the benefit of others (1975). Economist Margolis claims that altruistic behavior is something that the actor could have done better for himself had he chosen to ignore the effect of his choice on others (1982). Psychologists look at altruism as combining two factors: intentions and the amount of benefit or cost to the actor (Crawford et al., 1987). As sociologists, Pilivian and Charng have chosen to adopt a largely motive-based definition of altruism as "behavior costly to the actor involving other-regarding sentiments; if an act is or appears to be motivated mainly out of consideration of another's needs rather than one's

own, we call it altruistic" (1990, p. 30). Sociologist Simmons argues that altruism is one process that helps glue society together and without it society would not function as it should (1991).

Altruism is of particular interest to evolutionary social scientists. The question is often why a person would extend any prosocial behavior whatsoever to another individual (Olson and Hergenhahn, 2011). Recent research in evolution of cooperation has proposed that individuals benefit from being generous with others, which in turn elicits generosity from others (Kurzban et al., 2015). An individual signals to another individual that one is generous and this can lead to benefits for the individual doing the signaling, such as being chosen as a partner or mate (Kurzban et al., 2015). Hamilton looks at altruism in the form of natural selection and argues that helping kin (individuals related by genetic makeup) would promote one's own genes (1964). Trivers proposes a theory called reciprocal altruism, which asserts that individuals help others to the degree that they can anticipate being helped in return (1971). It is clear that human beings, as a species, are exceptionally helpful to others, regardless of kinship and in-group versus out-group belonging (Kurzban er al., 2015).

Maner and Gailliot investigate the possibility that motivations for helping depend on the type of relationship that exists between the provider and the recipient of help (2007). One of the main concerns regarding charitable giving and prosocial behavior is the relationship the donor has to the recipient and whether their donation is anonymous and whether or not they receive credit (Radley and Kennedy, 1995). Maner and Gailliot consider the empathy-altruism hypothesis which says that empathic concern is associated with an affective focus on the person who is suffering (rather than oneself), and therefore promotes truly selfless motivation to provide aid (2007). They propose that empathic concern and helping is less likely to be observed among

strangers and more likely to be promoted amongst those with whom they have a close relationship (2007). Their findings suggest that factors motivating prosocial action in close relationships may be different or greater from those that motivate helping among strangers, (Maner and Gailliot, 2007).

Another controversy has emerged from altruism is called the altruism-egoism controversy. It argues whether people are actually capable of altruism or whether all helping behavior is egoistic and self-serving (Simmons, 1991). There has also been a "paradigm shift" in the altruism research and many social scientists believe that prosocial behavior no longer has egoistic motives and that the altruistic impulse does indeed exist (Piliavin and Charng, 1990). This means that people are more willing and able to display altruistic behavior without expecting anything in return or having ulterior motives to their prosocial behavior. Piliavin and Charng examine various types of altruism and review whether there is such as thing as an altruistic or prosocial personality (1990). They consider various factors in the altruism research, such as gender, in-group versus out-group, risk-taking, and rewards (Piliavin and Charng, 1990). They also examine the development of altruism in people and attribute modeling of prosocial behavior to social learning theory with parents having the most influential role in a child's life (Piliavin and Charng, 1990).

Winterich et al. investigate how identities play a role in the prosocial behavior of donations (2009). They focus on two important social identities - gender identity and moral identity - and look to see how they result in different in-group and out-group donations (Winterich et al., 2009). They found that moral identity importance tends to increase donations to out-groups and not in-groups, however, this only occurs for feminine gender identity, not

masculine gender identity (Winterich et al., 2009). People with masculine gender identity tend to have a moral identity that is likely to increase donations to the in-group, not out-group (Winterich et al., 2009). Winterich et al. thus conclude that those who identify under the masculine gender identity are more egoistic and focus more on themselves while those who identify under the feminine gender identity are less egoistic and focus on others in their in-group (2009).

The present study begins to explore the effect of birth order on a person's attitudinal orientations to altruism. Based on an in-depth review of the existing research, the following hypotheses are proposed:

Hypothesis 1: Middle born children are more likely to report altruistic attitudes than first or last born children.
Hypothesis 2: Youngest children are more likely to take a risk and report altruistic attitudes and behavior.
Hypothesis 3: First borns are more likely to report altruistic attitudes because of the helping behavior they displayed toward youngest siblings.
Hypothesis 4: Children from larger families (4+ kids) are more likely to report altruistic attitudes than children from smaller families (3 kids or less).
Hypothesis 5: Risk takers are more likely to report altruistic attitudes.

METHODS

Sample

316 undergraduate students from a small, private midwestern University located in an urban setting with a predominantly white population voluntarily participated in this study. Participants ranged in age from 18 to 23+ years and had a mean age of 19 years old, which is considered to be traditionally aged college students. At an institution where around 60% of the

student body are female and 40% are male, in my sample there were 136 females, 167 males, 6 other, and 2 who prefered not to shared their gender. In terms of race, 186 were caucasian, 10 were Black/African American, 16 were Asian or Pacific Islander, 27 were multiracial, 11 defined themselves as other and no one identified as Native American/American Indian. Participants categorized themselves into the following ordinal positions in their household, with ordinal position referring to the actual order in which a child was born: 9.8% were only children, 34.8% were the first born, 13.9% were the second, but not last born, 7% were the third, but not last born, 2.5% were the fourth or more, but not last born, and 31.3% were the youngest child.

Design

Each participant was asked to use clickers in a classroom setting to answer twenty-four multiple-choice survey questions regarding different aspects of altruism and attitudes toward helping behavior, birth order, and individual demographics (See Appendix I). Thirteen questions measuring altruism were used and adapted from the General Social Survey (GSS) created by NORC at the University of Chicago (GSS Data Explorer, 2016). Altruism is a broad notion and can be measured and captured in a variety of different dimensions. I am not assuming that various dimensions will behave the same way, therefore, each attitude dimension of altruism was measured and analyzed independently of one another. The "Willing to Help Those Less Fortunate" variable stated "People should be willing to help others who are less fortunate". All responses were based on a Likert Scale ranging from 5 indicating "Strongly Agree" to 1 indicating "Strongly Disagree". The "Take Care of Yourself and Family First" variable stated "You should take care of yourself and your family first before helping other people." and

responses were based on a Likert Scale ranging from 5 indicating “Strongly Agree” to 1 indicating “Strongly Disagree”. The “Should Help Less Well Off Friend” variable stated “People who are better off should help friends who are less well off” and responses were based on a Likert Scale ranging from 5 indicating “Strongly Agree” to 1 indicating “Strongly Disagree”. The “Other’s Misfortunes Do Not Disturb Me” variable stated “Other people’s misfortunes do not usually disturb me a great deal.” and responses were based on a Likert Scale ranging from 5 indicating “Strongly Agree” to 1 indicating “Strongly Disagree”. The “Volunteering to Help Someone is Rewarding” variable stated “Volunteering to help someone is very rewarding.” and responses were based on a Likert Scale ranging from 5 indicating “Strongly Agree” to 1 indicating “Strongly Disagree”. The “People Should Look After Themselves Only” variable stated “These days people need to look after themselves and no overly worry about others.” and responses were based on a Likert Scale ranging from 5 indicating “Strongly Agree” to 1 indicating “Strongly Disagree”. The “Rather Suffer Myself Than Let Family Suffer” variable stated “I would rather suffer myself than let a family member suffer.” and responses were based on a Likert Scale ranging from 5 indicating “Strongly Agree” to 1 indicating “Strongly Disagree”. The “Willing to Help Friends Over Family” variable stated “I am more willing to help a friend in need rather than a family member in need.” and responses were based on a Likert Scale ranging from 5 indicating “Strongly Agree” to 1 indicating “Strongly Disagree”. The “Sacrifice My Wishes For Family Member’s Wishes” variable stated “I am usually willing to sacrifice my own wishes to let a family member achieve his/hers.” and responses were based on a Likert Scale ranging from 5 indicating “Strongly Agree” to 1 indicating “Strongly Disagree”. The “Willing to Risk Safety to Help Others” variable stated “I am willing to risk my safety in

order to help someone in need" and responses were based on a Likert Scale ranging from 5 indicating "Strongly Agree" to 1 indicating "Strongly Disagree". The "Frequency of Blood Donation" variable asked "During the past 12 months, how often have you donated blood? " with responses ranging from "more than once a week" to "not at all in the past year". The "Frequency of Food and Money Donation to Homeless" variable asked "During the past 12 months, how often have you given food or money to a homeless person?"with responses ranging from "more than once a week" to "not at all in the past year". The "Frequency of Money or Items to Charity" variable asked "During the past 12 months, how often have you given money or items to charity?" with responses ranging from "more than once a week" to "not at all in the past year".

In addition to the thirteen measures of altruism, additional variables were created to test the two of the five hypotheses. The MIDDLEBORNS variable was created for H1 by breaking down the BRTHORDR variable (See Appendix I) and combining those who responded "Second Born (but not last)", "Third Born (but not last)", and "Fourth of more born (but not last)" into one separate variable, MIDDLEBORNS. The RISKTAKERS variable was created for H5 by taking the "Willing to Risk Safety to Help Others" altruism variable (See Appendix I) and combining those who responded "Strongly Agree" and "Agree" into one separate variable, RISKTAKERS.

Analytic Strategy

Participants were asked questions regarding their attitudes towards altruism based on a survey instrument I created using information from previous research and replicating question items from the GSS (See Appendix 1). The thirteen altruism attitude measures were created after

performing a factor analysis to test how unique each attitude measure was from the others. The results of the analysis suggested that each attitude measure was distinct enough that they had to be measured separately from one another. Independent sample t-tests were run using the SPSS software to identify significance on the following items: birth order, family size, race, gender, and socioeconomic status. The birth order variable (BRTHORDR) (See Appendix 1) was converted into dummy variables for each ordinal birth position: “only child”, “first born”, “second born (but not last)”, “third born (but not last)”, “fourth born (but not last)”, and “youngest child”. The family size variable (NUMBRSIB) (See Appendix 1) was converted to two dummy variables: small family (3 children or less) and big family (4 children or more). The RACE variable (See Appendix 1) was also broken down into dummy variables for the following responses: “Black/African American”, “White”, “Native American/American Indian”, “Asian or Pacific Islander”, and “Multiracial”. The “Native American/American Indian” variable ended up being deleted because no participants indicated this for their race. The GENDER variable (See Appendix 1) was converted into dummy variables for males and females. Lastly, socioeconomic status was measured through the MOMEDU variable (See Appendix 1) and dummy variables were created for each response: “less than high school diploma”, “high school graduate”, “attended some college (no 4 year degree)”, “college degree”, “attended graduate/professional school”, and “graduate/professional degree”. Additional t-test analysis was done to consider how middle borns and risk takers cross with the altruism measures.

FINDINGS/ANALYSIS

Prosocial behavior is a humanistic quality, however, how much and how willing a person is to help another individual can vary. One unspoken belief is that people should help others who are less fortunate. The idea is that you should feel the need to act altruistically towards someone who has less than you because morally that is the right thing to do. In my results, specifically looking at birth order, I only found this to be the case some of the time and for very distinct altruism measures and cases. First born children were significantly more likely to agree on only one of the thirteen altruism measures, the "Other's Misfortunes Do Not Disturb Me" measure, which had to be reverse coded due to the nature of the statement. This suggests that first born children are more likely to report that they are not as bothered by other people's misfortunes compared to all other birth order positions, which could indicate that first born have a more selfish personality than other birth order positions. Middle born children were significantly less likely to report that they would rather help a friend in need rather than a family member in need, which could indicate that middle born children feel more altruistically toward family members than strangers. Youngest born children were significantly less likely to report that people need to look after themselves and not overly worry about others and were significantly more likely to report that they are willing to risk their safety in order to help someone in need. This indicates that youngest born children are more likely to act altruistically toward others and risk their safety compared to other birth order positions. Lastly, only children were significantly less likely to report that they would rather suffer themselves than let a family member suffer and they were significantly less likely to sacrifice their own wishes to let a family member achieve theirs. This suggests that only children, like first born children, are more selfish when it comes to altruistic

behavior compared to all other birth order positions. I am now going to breakdown my findings by each of the thirteen altruism measures and analyze them based on birth order, gender, race, socioeconomic status, and family size.

Willing to Help Those Less Fortunate

In terms of the OTHSHELP ("Willing to Help Those Less Fortunate") variable, data analysis indicate that males (mean 4.39) scored significantly ($p = .000$) higher than did females (mean 4.03). This indicates that males more strongly believe that people should be willing to help others who are less fortunate compared to females. While the research did not specifically look at gender effects on altruistic attitudes, it is unclear what made males stand out on this particular altruism variable compared to females. One possible explanation could be that males feel that they already hold on a dominant place in society and have access to more resources than females. Therefore, they may more likely feel that it is right that they use their "power" to help those who are less fortunate.

Table 1 - Willing to Help Those Less Fortunate

Variable	**Response**	**Dummy Variable**	**Mean**	**T-test significance**
Birth Order	Only child	Only child	4.03	.116
		Not only child	4.26	
	First born	First born	4.20	.489
		Not first born	4.26	
	Second born (but not last)	Second born	4.26	.841
		Not second born	4.23	
	Third born (but not last)	Third born	4.45	.140

		Not third born	4.22	
	Fourth born (but not last)	Fourth born	4.29	.852
		Not fourth born	4.23	
	Youngest child	Youngest child	4.26	.681
		Not youngest child	4.22	
Race	Black/African American	Black/African American	4.60	.105
		Not Black/African American	4.22	
	Asian or Pacific Islander	Asian or Pacific Islander	4.20	.846
		Not Asian or Pacific Islander	4.24	
	White	White	4.21	.441
		Not White	4.28	
	Multiracial	Multiracial	4.18	.664
		Not Multiracial	4.24	
Gender	Female	Female	4.03	.000**
	Male	Male	4.39	
Mom Education	Less than high school diploma	Less than high school diploma	4.46	.249
		Not less than high school diploma	4.23	
	High school graduate	High school graduate	4.20	.723
		Not high school graduate	4.24	
	Attended some college (no 4 year degree)	Attended some college (no 4 year degree)	4.16	.196
		Not attended some college (no 4 year degree)	4.27	
	College degree (4 year)	College degree (4 year)	4.29	.426
		Not college degree (4 year)	4.22	

	Attended graduate/professional school	Attended graduate/professional school	4.22	.956
		Not attended graduate/professional school	4.24	
	Graduate/professional degree	Graduate/professional degree	4.25	.861
		Not graduate/professional degree	4.23	
Family Size	Big family (4+ kids)	Big family (4+ kids)	4.27	.669
	Small family (3 kids or less)	Small family (3 kids or less)	4.23	

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

Take Care of Yourself and Family First

The research tells us a few different ideas about altruism towards family in terms of birth order, such as middle borns feel less of a relationship toward their families than non family members due to their position as a middle child (Salmon, 2003). Other researchers argue that growing up in large family promotes generosity (Kalliopuska, 1984) but towards whom is not clear. Regardless of the research, the data found no significance in terms of birth order on the choice to help take care of yourself and your family first over others. However, there were some interesting findings when it came to respondent's demographic information.

On the FIRSTYOU ("Take Care of Yourself and Family First") variable, data analysis indicate that non-white respondents (mean 4.23) scored significantly ($p = .018$) higher on this measure than did white respondents (mean 4.00). This indicates that individuals identifying as "White" do not believe that they should put themselves and their families before helping other people compared to other race identities. Similar to the "Willing to Help Those Less Fortunate" variable, White respondents may already identify with their privileged place in society and feel

that themselves and their family do not need as much help as those outside of the family. Having said that, Black/African American respondents answered oppositely of White respondents. In another analysis, the data indicate that Black/African American respondents (4.60) scored significantly (p = .043) higher than did not Black/African American respondents. This suggests that individuals identifying as "Black/African American" believe that they should put themselves and their families first before helping other people compared to other race identities. This could be attributed to their minority status in our society, compared to Whites, and their belief that they have to fight for what they want and need. This would explain why their altruism attitude toward helping themselves and their family is so high.

Lastly, data analysis indicate that female respondents (mean 4.20) scored significantly (p = .039) higher than did male respondents. This suggests that females more believe that they should put themselves and their family before helping others as compared to males. Women have an inherent feeling of nurturance and protection. It is not surprising that female respondents more strongly believe that they should care for themselves and family before others whom they are not blood related or have a familial obligation to.

Table 2 - Take Care of Yourself and Family First

Variable	**Response**	**Dummy Variable**	**Mean**	**T-test significance**
Birth Order	Only child	Only child	3.93	.273
		Not only child	4.11	
	First born	First born	4.19	.092
		Not first born	4.03	
	Second born (but not last)	Second born	4.21	.294
		Not second born	4.07	

	Third born (but not last)	Third born	4.09	.989
		Not third born	4.09	
	Fourth born (but not last)	Fourth born	4.29	.517
		Not fourth born	4.08	
	Youngest child	Youngest child	3.97	.082
		Not youngest child	4.14	
Race	Black/African American	Black/African American	4.60	.043*
		Not Black/African American	4.07	
	Asian or Pacific Islander	Asian or Pacific Islander	4.38	.148
		Not Asian or Pacific Islander	4.07	
	White	White	4.00	.018*
		Not White	4.23	
	Multiracial	Multiracial	4.04	.719
		Not Multiracial	4.09	
Gender	Female	Female	4.20	.039*
	Male	Male	4.01	
Mom Education	Less than high school diploma	Less than high school diploma	4.38	.180
		Not less than high school diploma	4.08	
	High school graduate	High school graduate	4.04	.694
		Not high school graduate	4.10	
	Attended some college (no 4 year degree)	Attended some college (no 4 year degree)	4.16	.263
		Not attended some college (no 4 year degree)	4.05	
	College degree (4 year)	College degree (4 year)	4.08	.863
		Not college degree (4 year)	4.09	

	Attended graduate/professional school	Attended graduate/professional school	4.00.	.741
		Not attended graduate/professional school	4.09	
	Graduate/professional degree	Graduate/professional degree	3.98	.271
		Not graduate/professional degree	4.11	
Family Size	Big family (4+ kids)	Big family (4+ kids)	4.22	.123
	Small family (3 kids or less)	Small family (3 kids or less)	4.05	

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

Should Help Less Well Off Friend

It can vary from one individual to another whether they believe that relationships with friends are as important as relationships with family and partners. The only thing that can be concluded from the research is the middle borns tend to be closer to friends and siblings than their parents, however, this does not indicate whom they are most likely to direct their altruistic behavior toward.

On the HELPFRDS ("Should Help Less Well Off Friend") variable, data analysis indicate no significant findings. This means that respondents were not significantly different from one another based on their birth order, gender, socioeconomic status, race, or family size in whether they believe that people who are better off should help friends who are less well off. This is to be expected given that even the research tells us little to nothing about feelings of prosociality toward friends. A majority of the time, people are friends with those who are most similar to them, including financial circumstances. It can be hard to think about whether you would deliver help to a friend who is less well off when you are more than likely in a similar

position. The topic of altruism toward friends needs further development before any conclusions can be made.

Table 3 - Should Help Less Well Off Friend

Variable	**Response**	**Dummy Variable**	**Mean**	**T-test significance**
Birth Order	Only child	Only child	3.67	.840
		Not only child	3.64	
	First born	First born	3.53	.079
		Not first born	3.70	
	Second born (but not last)	Second born	3.65	.915
		Not second born	3.64	
	Third born (but not last)	Third born	3.73	.583
		Not third born	3.63	
	Fourth born (but not last)	Fourth born	3.29	.225
		Not fourth born	3.65	
	Youngest child	Youngest child	3.75	.103
		Not youngest child	3.59	
Race	Black/African American	Black/African American	3.70	.803
		Not Black/African American	3.64	
	Asian or Pacific Islander	Asian or Pacific Islander	3.31	.085
		Not Asian or Pacific Islander	3.66	
	White	White	3.62	.556
		Not White	3.67	
	Multiracial	Multiracial	3.89	.081
		Not Multiracial	3.62	
	Female	Female	3.62	.754

Gender	Male	Male	3.65	
Mom Education	Less than high school diploma	Less than high school diploma	3.77	.540
		Not less than high school diploma	3.63	
	High school graduate	High school graduate	3.60	.714
		Not high school graduate	3.65	
	Attended some college (no 4 year degree)	Attended some college (no 4 year degree)	3.53	.100
		Not attended some college (no 4 year degree)	3.69	
	College degree (4 year)	College degree (4 year)	3.69	.520
		Not college degree (4 year)	3.62	
	Attended graduate/professional school	Attended graduate/professional school	3.67	.915
		Not attended graduate/professional school	3.64	
	Graduate/professional degree	Graduate/professional degree	3.75	.243
		Not graduate/professional degree	3.61	
Family Size	Big family (4+ kids)	Big family (4+ kids)	3.63	.882
	Small family (3 kids or less)	Small family (3 kids or less)	3.64	

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

Other's Misfortunes Do Not Disturb Me

First born children are often the ones with the most responsibility. This can can be seen through taking care of younger siblings in the household as well as being in charge of the parent's care as they age. The research even tells us that first born are more likely to display prosocial behavior toward the family (Curtis and Cowell, 1993; Maner and Gailliot, 2007). On

the EMPATHY4 ("Other's Misfortunes Do Not Disturb Me") variable, in terms of birth order, data analysis indicate that first borns (mean 2.71) scored significantly (p = .050) higher than non first borns (mean 2.49) which could indicate that first born children are not as bothered by other people's misfortunes as other ordinal positions. Given that first borns are arguably appointed so much responsibility toward their family throughout their lifetime, it is fair that first borns feel a little selfish when it comes to acting altruistically toward others. This measure did not specify who the "other" is, whether that be kin or non-kin. If the "other" referred to kin, different results may emerge due to their responsibility to the family already.

In another analysis, data indicate that female respondents (mean 2.55) scored significantly (p = .000) higher on the "Other's Misfortunes Do Not Disturb Me" variable than male respondents (mean 2.36). This indicates that females strongly believe that other people's misfortunes do not disturb them a great deal as compared to males. This finding is a bit surprising given that females are usually socialized to be more friendly and caring over men. While this may be how society believes females to act, this may not be how they think. Just because a woman performs an altruistic act towards another person does not mean that their misfortunes truly disturbs them on the outside. They could be performing the act with egoistic motives and no one would know but themselves. Unfortunately, this is something that goes beyond the scope of this study.

Table 4 - Other's Misfortunes Do Not Disturb Me

Variable	**Response**	**Dummy Variable**	**Mean**	**T-test significance**
Birth Order	Only child	Only child	2.63	.695
		Not only child	2.56	

	First born	First born	2.71	.050*
		Not first born	2.49	
	Second born (but not last)	Second born	2.56	.941
		Not second born	2.57	
	Third born (but not last)	Third born	2.41	.418
		Not third born	2.58	
	Fourth born (but not last)	Fourth born	2.29	.429
		Not fourth born	2.57	
	Youngest child	Youngest child	2.44	.120
		Not youngest child	2.63	
Race	Black/African American	Black/African American	2.40	.572
		Not Black/African American	2.57	
	Asian or Pacific Islander	Asian or Pacific Islander	2.50	.770
		Not Asian or Pacific Islander	2.57	
	White	White	2.55	.731
		Not White	2.59	
	Multiracial	Multiracial	2.75	.291
		Not Multiracial	2.55	
Gender	Female	Female	2.84	.000**
	Male	Male	2.36	
Mom Education	Less than high school diploma	Less than high school diploma	2.15	.110
		Not less than high school diploma	2.59	
	High school graduate	High school graduate	2.58	.942
		Not high school graduate	2.57	
	Attended some college (no 4 year degree)	Attended some college (no 4 year degree)	2.67	.223

		Not attended some college (no 4 year degree)	2.52	
	College degree (4 year)	College degree (4 year)	2.55	.830
		Not college degree (4 year)	2.58	
	Attended graduate/professional school	Attended graduate/professional school	2.89	.307
		Not attended graduate/professional school	2.56	
	Graduate/professional degree	Graduate/professional degree	2.52	.642
		Not graduate/professional degree	2.58	
Family Size	Big family (4+ kids)	Big family (4+ kids)	2.40	.094
	Small family (3 kids or less)	Small family (3 kids or less)	2.62	

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

Volunteering to Help Someone is Rewarding

The opportunities to volunteer our time toward others is endless. Many people find themselves volunteering multiple times in their lives, whether the choice was theirs or not. How they feel about the volunteering is a whole different story.

On the VLNTEER ("Volunteering to Help Someone is Rewarding") variable, data analysis indicate that white respondents (mean 4.35) scored significantly ($p = .007$) higher than non white respondents (mean 4.11). This suggests that individuals identifying as "White" believe that volunteering to help others is rewarding compared to other race identities. Why White respondents feel more strongly about this over other races is unclear. Perhaps White respondents were socialized differently and raised in a culture where volunteering to help other people is important in life, therefore, they see it as rewarding and fulfilling. Another possibility could be

that White respondents tend to be in a position of higher socioeconomic status, which gives them more resources and more ability to volunteer their time toward others.

In another analysis, male respondents (mean 4.43) scored significantly ($p = .000$) higher than did females (mean 4.02) which indicates that males more strongly believe that volunteering to help someone is very rewarding as compared to females. This finding surprises me given the caring nature of females and that females are often socialized to care for others and act prosocially. Perhaps females display this behavior more toward their family and males display their altruistic behavior outwardly toward others through volunteering acts. This hypothesis is beyond the scope of this study but would be interesting to investigate in future research.

Table 5 - Volunteering to Help Someone is Rewarding

Variable	**Response**	**Dummy Variable**	**Mean**	**T-test significance**
Birth Order	Only child	Only child	4.20	.670
		Not only child	4.26	
	First born	First born	2.47	.845
		Not first born	4.25	
	Second born (but not last)	Second born	4.33	.462
		Not second born	4.24	
	Third born (but not last)	Third born	4.32	.679
		Not third born	4.25	
	Fourth born (but not last)	Fourth born	4.29	.912
		Not fourth born	4.25	
	Youngest child	Youngest child	4.21	.459
		Not youngest child	4.28	
	Black/African American	Black/African American	4.50	.289

Race		Not Black/African American	4.25	
	Asian or Pacific Islander	Asian or Pacific Islander	4.38	.507
		Not Asian or Pacific Islander	4.25	
	White	White	4.35	.007**
		Not White	4.11	
	Multiracial	Multiracial	4.14	.403
		Not Multiracial	4.27	
Gender	Female	Female	4.02	.000**
	Male	Male	4.43	
Mom Education	Less than high school diploma	Less than high school diploma	4.15	.617
		Not less than high school diploma	4.26	
	High school graduate	High school graduate	4.33	.444
		Not high school graduate	4.24	
	Attended some college (no 4 year degree)	Attended some college (no 4 year degree)	4.24	.840
		Not attended some college (no 4 year degree)	4.26	
	College degree (4 year)	College degree (4 year)	4.26	.951
		Not college degree (4 year)	4.25	
	Attended graduate/professional school	Attended graduate/professional school	4.67	.091
		Not attended graduate/professional school	4.24	
	Graduate/professional degree	Graduate/professional degree	4.18	.406
		Not graduate/professional degree	4.27	
Family Size	Big family (4+ kids)	Big family (4+ kids)	4.33	.360

	Small family (3 kids or less)	Small family (3 kids or less)	4.23	

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

People Should Look After Themselves Only

The SELFFRST ("People Should Look After Themselves Only") variable is very similar to the "Other's Misfortunes Do Not Disturb Me" variable in that is points towards the idea that people should looks after themselves and no overly worry about others. Data analysis indicate that youngest born children (mean 2.48) scored significantly ($p = .027$) lower than non youngest children (mean 2.74). This suggests that youngest born children do not believe that people should look after themselves and not overly worry about others. This finding is supported by the research (Eckstein et al., 2010) and supports H2 in that youngest born children are more likely to act altruistically compared to other ordinal positions. The research suggests that youngest borns are more likely to be risk takers, therefore, act altruistically (Eckstein et al.,2010; Krause et al., 2014). However, it can not be concluded from the data findings and the focus must be on the finding that youngest borns more feel that they should worry about others instead of solely looking after themselves.

Other analyses indicate that female respondents (mean 2.81) scored significantly ($p = .013$) higher on this measure than male respondents (mean 2.54). This suggests that females, as compared to males, more strongly feel that people need to look after themselves and not overly worry about others. This finding almost directly ties into the finding for females in the "Other's Misfortunes Do Not Disturb Me" altruism measure in that just because we see women perform prosocial behavior does not mean that inside they feel that they should overly worry about others over themselves.

Table 6 - People Should Look After Themselves Only

Variable	Response	Dummy Variable	Mean	T-test significance
Birth Order	Only child	Only child	2.80	.390
		Not only child	2.64	
	First born	First born	2.74	.265
		Not first born	2.62	
	Second born (but not last)	Second born	2.77	.389
		Not second born	2.64	
	Third born (but not last)	Third born	2.64	.907
		Not third born	2.66	
	Fourth born (but not last)	Fourth born	2.57	.804
		Not fourth born	2.66	
	Youngest child	Youngest child	2.48	.027*
		Not youngest child	2.74	
Race	Black/African American	Black/African American	3.00	.246
		Not Black/African American	2.65	
	Asian or Pacific Islander	Asian or Pacific Islander	2.63	.882
		Not Asian or Pacific Islander	2.66	
	White	White	2.61	.253
		Not White	2.74	
	Multiracial	Multiracial	2.71	.746
		Not Multiracial	2.65	
Gender	Female	Female	2.81	.013*
	Male	Male	2.54	
	Less than high school diploma	Less than high school diploma	2.62	.865

Mom Education		Not less than high school diploma	2.66	
	High school graduate	High school graduate	2.65	.957
		Not high school graduate	2.66	
	Attended some college (no 4 year degree)	Attended some college (no 4 year degree)	2.75	.256
		Not attended some college (no 4 year degree)	2.62	
	College degree (4 year)	College degree (4 year)	2.54	.170
		Not college degree (4 year)	2.71	
	Attended graduate/professional school	Attended graduate/professional school	3.11	.145
		Not attended graduate/professional school	2.65	
	Graduate/professional degree	Graduate/professional degree	2.59	.552
		Not graduate/professional degree	2.67	
Family Size	Big family (4+ kids)	Big family (4+ kids)	2.63	.792
	Small family (3 kids or less)	Small family (3 kids or less)	2.67	

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

Rather Suffer Myself Than Let Family Suffer

On the MESUFFER ("Rather Suffer Myself Than Let Family Suffer") variable, data analysis indicate that only children (mean 3.77) scored significantly ($p = .015$) lower than non only children which could suggest that only children would rather let a family member suffer than themselves. Given what society believes about only children, this is not surprising. People usually feel that only children are selfish and do not care about others given that they arguably grew up with no one to care for but themselves. Research even tells us that only children are more likely to be spoiled (Eckstein et al., 2010).

Other data analysis indicates that respondents from big families (mean 4.32) scored marginally significantly (p = .051) higher than respondents from small families. This indicates that people from larger families are more likely to say that they would rather suffer themselves than let a family member suffer as compared to people from smaller families. While this significance is only marginal, it does tell us something about family size and how that plays into altruism attitudes. Sawyer argues that growing up in a large family promotes generosity (1966) and this generosity could lead one to feel that they should suffer themselves than let someone else suffer. Individuals from larger families have more people they are genetically tied to which may give them a feeling of obligation when trouble arises. If a family member is in trouble, they may morally believe it is their duty to sacrifice themselves in order to help their family because that is how they were socialized when growing up in a large family.

Table 7 - Rather Suffer Myself Than Let Family Suffer

Variable	**Response**	**Dummy Variable**	**Mean**	**T-test significance**
Birth Order	Only child	Only child	3.77	.015*
		Not only child	4.18	
	First born	First born	4.25	.115
		Not first born	4.08	
	Second born (but not last)	Second born	4.25	.368
		Not second born	4.12	
	Third born (but not last)	Third born	4.14	.988
		Not third born	4.14	
	Fourth born (but not last)	Fourth born	3.86	.392
		Not fourth born	4.15	

	Youngest child	Youngest child	4.09	.556
		Not youngest child	4.19	
Race	Black/African American	Black/African American	4.10	.887
		Not Black/African American	4.14	
	Asian or Pacific Islander	Asian or Pacific Islander	4.25	.606
		Not Asian or Pacific Islander	4.13	
	White	White	4.11	.496
		Not White	4.18	
	Multiracial	Multiracial	4.18	.804
		Not Multiracial	4.14	
Gender	Female	Female	4.04	.099
	Male	Male	4.21	
Mom Education	Less than high school diploma	Less than high school diploma	4.23	.702
		Not less than high school diploma	4.14	
	High school graduate	High school graduate	4.29	.218
		Not high school graduate	4.11	
	Attended some college (no 4 year degree)	Attended some college (no 4 year degree)	4.14	.944
		Not attended some college (no 4 year degree)	4.14	
	College degree (4 year)	College degree (4 year)	4.06	.349
		Not college degree (4 year)	4.17	
	Attended graduate/professional school	Attended graduate/professional school	4.22	.775
		Not attended graduate/professional school	4.14	
	Graduate/professional degree	Graduate/professional degree	4.08	.585

		Not graduate/professional degree	4.15	
Family Size	Big family (4+ kids)	Big family (4+ kids)	4.32	.051
	Small family (3 kids or less)	Small family (3 kids or less)	4.09	

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

Willing to Help Friends Over Family

In terms of the HELPFRND ("Willing to Help Friends Over Family") variable, this study is investigating the willingness of participants attitudes toward helping friends over family. When it comes to birth orders, data analysis indicate that second born respondents (mean 2.02) scored significantly ($p = .011$) lower than non second born respondents (mean 2.37). This suggests that second borns are less willing to help a friend in need and more willing to help a family member in need compared to other ordinal positions. This is the only significant finding for second born children and it fits with the research that tells us that middle borns, which include second borns, are less close to parents (i.e., family), therefore, they would more likely display their altruism toward friends and those not related to them. In other analysis, data indicate that youngest born children (mean 2.45) scored marginally significantly ($p = .058$) higher than all other ordinal positions(mean 2.26) which means they are more willing to help a friend in need than a family member in need. The reasoning behind these findings are complicated. While the research tells us that youngest borns are more likely to be lazy and spoiled (Adler, 1958), we also know from the data that youngest borns are more likely to disagree that they should look after themselves and not overly worry about others. If they are more likely to believe this, then it makes sense that their willingness to help anyone, whether that

be a friend or family member is significant. It is interesting that they would choose friends over family but further investigation would have to be done in order to determine why this is.

When it comes to demographic information, data analysis indicate that White respondents (mean 2.39) scored marginally significantly (p = .055) higher than non White respondents. This suggests that White respondents are slightly more willing to help a friend in need over a family member compared to non White respondents. This finding could tie into the belief that White people were socialized differently than other races and were raised to believe that helping other people, not necessarily their family, is moral and good.

Lastly, data analysis indicates that respondents from big families (mean 2.15) scored marginally significantly (p = .053) lower than respondents from small families (mean 2.37). This suggests that those individuals who come from large families are marginally less likely to agree that the would help a friend in need over family members in need compared to individuals from small families. This finding is similar to other findings in that respondents from big families may feel that they have a higher obligation toward their family so they are more likely to put their family first and friends second.

Table 8 - Willing to Help Friends Over Family

Variable	**Response**	**Dummy Variable**	**Mean**	**T-test significance**
Birth Order	Only child	Only child	2.43	.437
		Not only child	2.31	
	First born	First born	2.30	.785
		Not first born	2.33	
	Second born (but not last)	Second born	2.02	.011*
		Not second born	2.37	

	Third born (but not last)	Third born	2.27	.782
		Not third born	2.32	
	Fourth born (but not last)	Fourth born	2.29	.912
		Not fourth born	2.32	
	Youngest child	Youngest child	2.45	.058
		Not youngest child	2.26	
Race	Black/African American	Black/African American	1.90	1.06
		Not Black/African American	2.33	
	Asian or Pacific Islander	Asian or Pacific Islander	2.19	.515
		Not Asian or Pacific Islander	2.33	
	White	White	2.39	.055
		Not White	2.21	
	Multiracial	Multiracial	2.43	.474
		Not Multiracial	2.31	
Gender	Female	Female	2.40	.154
	Male	Male	2.26	
Mom Education	Less than high school diploma	Less than high school diploma	2.23	.694
		Not less than high school diploma	2.32	
	High school graduate	High school graduate	2.22	.366
		Not high school graduate	2.34	
	Attended some college (no 4 year degree)	Attended some college (no 4 year degree)	2.21	.104
		Not attended some college (no 4 year degree)	2.37	
	College degree (4 year)	College degree (4 year)	2.40	.350
		Not college degree (4 year)	2.29	

	Attended graduate/professional school	Attended graduate/professional school	2.56	.393
		Not attended graduate/professional school	2.31	
	Graduate/professional degree	Graduate/professional degree	2.45	.181
		Not graduate/professional degree	2.29	
Family Size	Big family (4+ kids)	Big family (4+ kids)	2.15	.053
	Small family (3 kids or less)	Small family (3 kids or less)	2.37	

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

Sacrifice My Wishes for Family Member's Wishes

How close your relationship is toward toward your family is going to indicate how likely you are to sacrifice your wishes in order for them to achieve theirs. Many things can play into family relationships, such as family size and gender. On the FMLYWISH ("Sacrifice My Wishes for Family Member's Wishes") variable, data analysis indicate that only children (mean 2.97) scored significantly (p = .005) lower than non only children indicating that only children are less willing to sacrifice their wishes in order for a family member to achieve theirs. This is not surprising given the research and common beliefs regarding only children being selfish and putting themselves before everyone else. What is surprising is that this is the only significant finding on this variable. Other findings have told us things, such as larger families are more likely to help family over non family. Also, the research indicates that first borns have a sort of responsibility to the family which would made seem obvious in that they would sacrifice their wishes for other family members. However, according to the data this is not significant for large families or first borns on this particular altruism measure.

Table 9 - Sacrifice My Wishes for Family Member's Wishes

Variable	**Response**	**Dummy Variable**	**Mean**	**T-test significance**
Birth Order	Only child	Only child	2.97	.005**
		Not only child	3.46	
	First born	First born	3.50	.223
		Not first born	3.36	
	Second born (but not last)	Second born	3.45	.725
		Not second born	3.40	
	Third born (but not last)	Third born	3.27	.466
		Not third born	3.42	
	Fourth born (but not last)	Fourth born	3.29	.717
		Not fourth born	3.41	
	Youngest child	Youngest child	3.47	.434
		Not youngest child	3.38	
Race	Black/African American	Black/African American	3.90	.084
		Not Black/African American	3.39	
	Asian or Pacific Islander	Asian or Pacific Islander	3.69	.211
		Not Asian or Pacific Islander	3.39	
	White	White	3.34	.113
		Not White	3.51	
	Multiracial	Multiracial	3.50	.593
		Not Multiracial	3.40	
Gender	Female	Female	3.33	.171
	Male	Male	3.47	
	Less than high school diploma	Less than high school diploma	3.62	.407

Mom Education		Not less than high school diploma	3.40	
	High school graduate	High school graduate	3.50	.468
		Not high school graduate	3.39	
	Attended some college (no 4 year degree)	Attended some college (no 4 year degree)	3.36	.491
		Not attended some college (no 4 year degree)	3.43	
	College degree (4 year)	College degree (4 year)	3.37	.652
		Not college degree (4 year)	3.42	
	Attended graduate/professional school	Attended graduate/professional school	3.89	.110
		Not attended graduate/professional school	3.40	
	Graduate/professional degree	Graduate/professional degree	3.33	.471
		Not graduate/professional degree	3.43	
Family Size	Big family (4+ kids)	Big family (4+ kids)	3.54	.169
	Small family (3 kids or less)	Small family (3 kids or less)	3.37	

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

Willing to Risk Safety to Help Others

One could argue that altruism is about risk. People are not forced to be prosocial and when they are, sometimes there is risk involved in terms of the outcome or even their safety. The goal of the RSKSAFTY ("Willing to Risk Safety to Help Others") variable was used as one way to examine who is most likely to risk their safety in order help someone. There are a variety of ways to measure risk attitudes and behaviors depending on the context. For example, one could measure risk attitudes by asking how likely one is to go skydiving. While this does measure risk,

it does not take into account the risk to help others. For this study, the risk measure specifically considers how risk plays into altruistic attitudes. Data analysis indicate that youngest born respondents (mean 3.63) scored significantly ($p = .050$) higher than non youngest born respondents (mean 3.41). This suggests that youngest born children are more willing than other ordinal positions to risk their safety to help someone in need. This ties directly into the research on youngest children being risk takers (Eckstein et al., 2010; Sulloway, 1996) and supports H5.

Other data analysis indicates that male respondents (mean 3.33) scored significantly ($p = .001$) lower than female respondents (mean 3.67). This implies that females, as compared to males, more strongly believe that they are willing to risk their safety in order to help someone in need. This finding is very surprising given the common assumption in our society that males are more likely to be risk takers in no matter what they do. Perhaps this is the case in terms of risking their personal safety to benefit themselves but when it comes to risking their safety for others, women are more likely to step up and risk their safety for others.

Table 10 - Willing to Risk Safety to Help Others

Variable	**Response**	**Dummy Variable**	**Mean**	**T-test significance**
Birth Order	Only child	Only child	3.57	.573
		Not only child	3.47	
	First born	First born	3.40	2.86
		Not first born	3.52	
	Second born (but not last)	Second born	3.27	.116
		Not second born	3.51	
	Third born (but not last)	Third born	3.50	.899
		Not third born	3.47	

	Fourth born (but not last)	Fourth born	3.14	.336
		Not fourth born	3.48	
	Youngest child	Youngest child	3.63	.050*
		Not youngest child	3.41	
Race	Black/African American	Black/African American	3.10	.192
		Not Black/African American	3.49	
	Asian or Pacific Islander	Asian or Pacific Islander	3.31	.469
		Not Asian or Pacific Islander	3.48	
	White	White	3.52	.313
		Not White	3.41	
	Multiracial	Multiracial	3.68	.225
		Not Multiracial	3.46	
Gender	Female	Female	3.67	.001**
	Male	Male	3.33	
Mom Education	Less than high school diploma	Less than high school diploma	3.38	.717
		Not less than high school diploma	3.48	
	High school graduate	High school graduate	3.65	.162
		Not high school graduate	3.45	
	Attended some college (no 4 year degree)	Attended some college (no 4 year degree)	3.42	.502
		Not attended some college (no 4 year degree)	3.50	
	College degree (4 year)	College degree (4 year)	3.44	.675
		Not college degree (4 year)	3.49	
	Attended graduate/professional school	Attended graduate/professional school	3.33	.640

		Not attended graduate/professional school	3.48	
	Graduate/professional degree	Graduate/professional degree	3.53	.649
		Not graduate/professional degree	3.46	
Family Size	Big family (4+ kids)	Big family (4+ kids)	3.51	.696
	Small family (3 kids or less)	Small family (3 kids or less)	3.47	

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

Frequency of Blood Donation

On the GIVBLOOD ("Frequency of Blood Donation") variable, data analysis indicate no significant findings. This means that respondents were not significantly different from one another by categories of birth order, gender, socioeconomic status, race, or family size, specifically in terms of how often they donate blood. It is unclear why this is. Giving blood is a taxing task that not only takes time and energy, but also risks our health in order to benefit someone else, often times a stranger to never be met. With that being said, it is surprising that there is no correlation between giving blood (the "Frequency of Blood Donation" variable) and risking individual safety in order to benefit others (the "Willing to Risk Safety to Help Others" variable). Further investigation could be done to determine why this is.

Table 11 - Frequency of Blood Donation

Variable	**Response**	**Dummy Variable**	**Mean**	**T-test significance**
Birth Order	Only child	Only child	1.33	.526
		Not only child	1.42	
	First born	First born	1.49	.187
		Not first born	1.37	

	Second born (but not last)	Second born	1.41	.956
		Not second born	1.42	
	Third born (but not last)	Third born	1.41	.970
		Not third born	1.42	
	Fourth born (but not last)	Fourth born	1.38	.878
		Not fourth born	1.42	
	Youngest child	Youngest child	1.37	.444
		Not youngest child	1.44	
Race	Black/African American	Black/African American	1.00	.071
		Not Black/African American	1.43	
	Asian or Pacific Islander	Asian or Pacific Islander	1.44	.900
		Not Asian or Pacific Islander	1.41	
	White	White	1.48	.068
		Not White	1.32	
	Multiracial	Multiracial	1.29	.334
		Not Multiracial	1.43	
Gender	Female	Female	1.42	.949
	Male	Male	1.41	
Mom Education	Less than high school diploma	Less than high school diploma	1.46	.816
		Not less than high school diploma	1.41	
	High school graduate	High school graduate	1.38	.749
		Not high school graduate	1.42	
	Attended some college (no 4 year degree)	Attended some college (no 4 year degree)	1.45	.581
		Not attended some college (no 4 year degree)	1.40	

	College degree (4 year)	College degree (4 year)	1.46	.553
		Not college degree (4 year)	1.40	
	Attended graduate/professional school	Attended graduate/professional school	1.56	.563
		Not attended graduate/professional school	1.41	
	Graduate/professional degree	Graduate/professional degree	1.32	.253
		Not graduate/professional degree	1.44	
Family Size	Big family (4+ kids)	Big family (4+ kids)	1.32	.222
	Small family (3 kids or less)	Small family (3 kids or less)	1.44	

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

Frequency of Food and Money Donation to Homeless

On the GIVHMLSS ("Frequency of Food and Money Donation to Homeless") variable, data analysis indicate no significant findings. Similar to the "Frequency of Blood Donation" variable, this means that respondents were not significant based on their birth order, gender, socioeconomic status, race, or family size in terms of how often they give money or food to homeless people. Donating to homeless people is not as taxing of a task as giving blood, so it is questionable why no significant findings emerged. This may have less to do with people's attitudes toward altruism and may be more about their attitudes toward homeless people and their inferior place in society compared to non homeless people.

Table 12 - Frequency of Food and Money Donation to Homeless

Variable	**Response**	**Dummy Variable**	**Mean**	**T-test significance**
Birth Order	Only child	Only child	2.53	.063
		Not only child	2.14	

	First born	First born	2.17	.931
		Not first born	2.18	
	Second born (but not last)	Second born	2.14	.808
		Not second born	2.18	
	Third born (but not last)	Third born	2.18	.973
		Not third born	2.17	
	Fourth born (but not last)	Fourth born	2.25	.846
		Not fourth born	2.17	
	Youngest child	Youngest child	2.08	.320
		Not youngest child	2.22	
Race	Black/African American	Black/African American	1.90	.429
		Not Black/African American	2.18	
	Asian or Pacific Islander	Asian or Pacific Islander	2.25	.780
		Not Asian or Pacific Islander	2.17	
	White	White	2.14	.470
		Not White	2.23	
	Multiracial	Multiracial	2.29	.579
		Not Multiracial	2.16	
Gender	Female	Female	2.22	.494
	Male	Male	2.14	
Mom Education	Less than high school diploma	Less than high school diploma	2.08	.748
		Not less than high school diploma	2.18	
	High school graduate	High school graduate	2.26	.588
		Not high school graduate	2.16	
	Attended some college (no 4 year degree)	Attended some college (no 4 year degree)	2.04	.156

		Not attended some college (no 4 year degree)	2.23	
	College degree (4 year)	College degree (4 year)	2.12	.634
		Not college degree (4 year)	2.19	
	Attended graduate/professional school	Attended graduate/professional school	2.33	.664
		Not attended graduate/professional school	2.17	
	Graduate/professional degree	Graduate/professional degree	2.33	.218
		Not graduate/professional degree	2.14	
Family Size	Big family (4+ kids)	Big family (4+ kids)	2.39	.066
	Small family (3 kids or less)	Small family (3 kids or less)	2.11	

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

Frequency of Money or Items to Charity

Unlike the previous variable that is looking specifically at homeless people, the GIVCHRTY ("Frequency of Money or Items to Charity") variable is investigating how often people donate money or items to charity. Data analysis indicate that male respondents (mean 2.80) scored significantly ($p = .016$) higher than female respondents (mean 2.54) which suggests that male respondents have given more money or items to charity than female respondents. This could be tied to the idea that men generally have higher prestige over women and have more access to their possessions and income than women. With that being said, history has told us that since men are the money makers, they choose how and where their money is spent. It is encouraging to see that they are choosing to donate their income to charity, but due to changes in society, it is unclear why there is a statistically significant difference between men and women.

Data analysis also indicate that respondents whose mother have a graduate/professional school degree (mean 3.00) scored significantly (p = .004) higher on this measure of altruism than those respondents whose mothers do not have a graduate/professional school degree (mean 2.61). This suggests that having a mother with a higher education, which usually indicates higher socioeconomic status, donate more money or items to charity than those of lower economic status or whose mother did not receive a graduate/professional school degree. While this is the first and only finding I have regarding socioeconomic status, it is not a surprising one. If someone has more income, they have flexibility in what they do with their money and possessions. If they choose to donate to charity, it should not be questioned and be left to happen.

It is worth noting that their were two significant findings on this altruism measure compared to the "Frequency of Food and Money Donation to Homeless" altruism measure. Both measures are examining how often people donate to those who are less fortunate, but one is specifically looking at homeless people while the other is looking at all charities. Charities can vary in whether they focus on mental illness, domestic violence, child welfare, etc. The findings may be tied to people's beliefs toward donating to charities that they support and believe in versus donating to a homeless person who they may have no relationship or a tie with.

Table 13 - Frequency of Money or Items to Charity

Variable	**Response**	**Dummy Variable**	**Mean**	**T-test significance**
Birth Order	Only child	Only child	2.74	.729
		Not only child	2.68	
	First born	First born	2.68	.955
		Not first born	2.69	
	Second born (but not last)	Second born	2.56	.342

		Not second born	2.71	
	Third born (but not last)	Third born	2.73	.832
		Not third born	2.68	
	Fourth born (but not last)	Fourth born	3.14	.197
		Not fourth born	2.68	
	Youngest child	Youngest child	2.68	.978
		Not youngest child	2.69	
Race	Black/African American	Black/African American	2.80	.699
		Not Black/African American	2.68	
	Asian or Pacific Islander	Asian or Pacific Islander	2.63	.792
		Not Asian or Pacific Islander	2.69	
	White	White	2.75	.131
		Not White	2.59	
	Multiracial	Multiracial	2.46	.195
		Not Multiracial	2.71	
Gender	Female	Female	2.54	.016*
	Male	Male	2.80	
Mom Education	Less than high school diploma	Less than high school diploma	2.38	.242
		Not less than high school diploma	2.70	
	High school graduate	High school graduate	2.71	.847
		Not high school graduate	2.68	
	Attended some college (no 4 year degree)	Attended some college (no 4 year degree)	2.61	.311
		Not attended some college (no 4 year degree)	2.72	
	College degree (4 year)	College degree (4 year)	2.58	.228

		Not college degree (4 year)	2.72	
	Attended graduate/professional school	Attended graduate/professional school	2.78	.768
		Not attended graduate/professional school	2.68	
	Graduate/professional degree	Graduate/professional degree	3.00	.004**
		Not graduate/professional degree	2.61	
Family Size	Big family (4+ kids)	Big family (4+ kids)	2.74	.628
	Small family (3 kids or less)	Small family (3 kids or less)	2.67	

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

Middle Borns

Data analysis of the MIDDLEBORN variables crossed with the altruism variables result in significance on 1 of the 13 measures: "Willing to Help Friends Over Family". For this variable, data analysis indicate that middle born children (mean 2.12) scored significantly (p = .021) lower than non middle born children (mean 2.38). This indicates that middle born children are less likely than other children to help a friend in need rather than a family member in need. This finding is not surprising given the finding we had for second born children on this same altruism measure. What is surprising is that it goes against the research that tells us that middle born children tend to have less of a relationship with family, specifically parents, over friends (Salmon, 2003). It also does not support H1 that argues for middle born children being more likely to report altruistic attitudes than first or last born children.

Table 14 - Middle Borns

Altruism variable	MIDDLEBORN Variable	Mean	T-Test significance
OTHSHELP	Middle born	4.32	.259
	Not middle born	4.21	
FIRSTYOU	Middle born	4.18	.272
	Not middle born	4.06	
HELPFRDS	Middle born	3.64	.995
	Not middle born	3.64	
EMPATHY4	Middle born	2.49	.405
	Not middle born	2.59	
VLNTEER	Middle born	4.32	.372
	Not middle born	4.23	
SELFFRST	Middle born	2.71	.582
	Not middle born	2.64	
MESUFFER	Middle born	4.18	.666
	Not middle born	4.13	
HELPFRND	Middle born	2.12	.021*
	Not middle born	2.38	
FMLYWISH	Middle born	3.38	.780
	Not middle born	3.42	
RSKSAFTY	Middle born	3.33	.121
	Not middle born	3.52	
GIVBLOOD	Middle born	1.41	.901
	Not middle born	1.42	
GIVHMLSS	Middle born	2.16	.915

	Not middle born	2.18	
GIVCHRTY	Middle born	2.67	.845
	Not middle born	2.69	

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

Risk and Altruism

On the RISKTAKER variable, data analysis indicate that the following altruism variables were positively significant: "Should Help Less Well Off Friend" ($p = .038$) (risk taker mean 3.73, not a risk taker 3.54) , "Rather Suffer Myself Than Let Family Suffer" ($p = .001$) (risk taker mean 4.30, not a risk taker mean 3.96), "Willing to Help Friends Over Family" ($p = .000$) (risk taker mean 2.48, not a risk taker 2.14), "Sacrifice My Wishes for Family Member's Wishes" ($p = .030$) (risk taker mean 3.52, not a risk taker 3.29), and "Frequency of Blood Donation" ($p = .007$) (risk taker mean 1.52, not a risk taker 1.29). On the other hand, the following altruism variables were negatively significant: "Take Care of Yourself and Family First" ($p = .015$) (risk taker mean 3.98, not a risk taker mean 4.21) and "People Should Look After Themselves Only" ($p = .004$) (risk taker mean 2.51, not a risk taker mean 2.82). This suggests that risk taking is indeed a form of altruistic behavior attribution. Risk takers, compared to non risk takers, are more likely to agree that people who are well off should help friends who are less well off, they would rather suffer themselves than let a family member suffer, they are more willing to help a friend in need rather than a family member in need, they are willing to sacrifice their own wishes to let a family member achieve theirs, and they donate blood more often. However, risk takers, compared to non risk takers, are less likely to agree that you should take care of yourself and your family before helping other people and that these days people need to look after themselves and not overly worry about others. From this data, I can conclude that risk takers are

significantly more likely to show altruistic tendencies than non risk takers. This supports H5 in that risk takers are indeed more likely to be altruistic, or at least display attitudes toward altruism. This finding also supports the idea that being altruistic is all about taking a risk.

Table 15 - Risk and Altruism

Altruism variable	**Risk Taker Variable**	**Mean**	**T-Test significance**
OTHSHELP	Risk taker	4.28	.212
	Not a risk taker	4.18	
FIRSTYOU	Risk taker	3.98	.015*
	Not a risk taker	4.21	
HELPFRDS	Risk taker	3.73	.038*
	Not a risk taker	3.54	
EMPATHY4	Risk taker	2.49	.119
	Not a risk taker	2.66	
VLNTEER	Risk taker	4.25	.964
	Not a risk taker	4.26	
SELFFRST	Risk taker	2.51	.004**
	Not a risk taker	2.82	
MESUFFER	Risk taker	4.30	.001**
	Not a risk taker	3.96	
HELPFRND	Risk taker	2.48	.000**
	Not a risk taker	2.14	
FMLYWISH	Risk taker	3.52	.030*
	Not a risk taker	3.29	
GIVBLOOD	Risk taker	1.52	.007**
	Not a risk taker	1.29	

GIVHMLSS	Risk taker	2.26	.170
	Not a risk taker	2.08	
GIVCHRTY	Risk taker	2.68	.984
	Not a risk taker	2.69	

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

DISCUSSION

The aim of this study was to quantitatively asses birth order effects on measures of attitudes toward altruism. According to the findings, we can see that the significant responses for only children indicated that they were more likely to put their own wishes before others. First borns were found to more likely agree that their misfortunes are more important than others. On the other hand, youngest born children were less likely to agree that they should only worry about themselves and they were more likely to agree that they would take a risk and help someone in need. From these findings, we can conclude that youngest born children are more likely to indicate positive attitudes toward altruism compared to all other birth order positions. It is important to note that this was a fairly small sample of undergraduate students from a small liberal arts college and that many more studies will need to be done before any overarching conclusions can be made.

Breakdown by Hypotheses

Hypothesis 1 asserts that middle born children are more likely to report altruistic attitudes than first or last born children. According to the data, there was only one significant finding for middle children on the thirteen altruism measures as compared to one significant finding for first

born children and two significant findings for the youngest children. Middle born children were negatively significant on the "Willing to Help Friends Over Family" variable which means that middle born children are less likely than all other children to help a friend in need rather than a family member in need. First born children were positively significant on the "Other's Misfortunes Do Not Disturb Me" variable which means that first born children are not as bothered by other people's misfortunes as other ordinal positions. Lastly, youngest children were significantly less likely to agree with the "People Should Look After Themselves Only" variable and were significantly more likely to agree with the "Willing to Risk Safety to Help Others" variable. This means that youngest children are more likely to take a risk and be altruistic compared to other ordinal positions, but they are more likely to believe that people should look after themselves and no overly worry about others. Therefore, hypothesis 1 was not supported. Middle borns share the same amount of altruism with first borns, however, middle borns have less altruistic attitudes than youngest children.

Hypothesis 2 states that youngest children are more likely to take a risk and be altruistic. According to the data, this is true and the hypothesis is supported. Youngest born children were significantly more likely to agree on the "Willing to Risk Safety to Help Others" variable which means that youngest born children are more willing to report that they would risk their safety to help someone in need compared to other ordinal positions. This finding matches the literature by Sulloway (1996) which argues that later born children, including youngest children, are generally more adventurous, open to experience, and open to risk taking.

Hypothesis 3 states that first borns are more likely to report altruistic attitudes because of the helping behavior they display toward youngest siblings. According to data, first borns

compared to all other birth order positions, showed significance on only one of the thirteen altruism variables compared to only children who showed significance on two of the thirteen variables and youngest children who also showed significance on two of the thirteen variables. This does not necessarily decline the hypothesis because first borns were significant on the "Other's Misfortunes Do Not Disturb Me" variable, which says that first born children are not as bothered by other people's misfortunes as other ordinal positions, and no other birth order position was significant on this variable. Therefore, hypothesis 3 was supported for one of the thirteen altruism variables.

Hypothesis 4 states that children from larger families (four or more kids) are more likely to be altruistic than children from smaller families (three kids or less). According to the data, this hypothesis was significant and supported for one of the thirteen altruism variable. In terms of the "Rather Suffer Myself Than Let Family Suffer" variable, people who come from large families are more likely to agree with the statement "I would rather suffer myself than let a family suffer" compared to children from smaller families who are less likely to agree with this statement.

Finally, hypothesis 5 states that risk takers are more likely to be altruistic. The risk taker variable was created by using the "Willing to Risk Safety to Help Others" altruism variable and combining together the responses of "Strongly Agree" and "Agree". According to the data, risk takers showed significance and altruism attitudes on seven of the twelve remaining altruism variables. Risk takers are more likely to agree that people should take care of themselves and family before helping other people, people who are better off should help friends who are less well off, they would rather suffer themselves than let a family member suffer, more willing to help a friend in need rather than a family member in need, willing to sacrifice their wishes to let

a family member achieve theirs and donate more blood. Since there were significant findings on more than half of the altruism variables, it is safe to say that hypothesis 5 was supported.

Breakdown by Demographics

While demographic information was not included in the original predictions or hypotheses, it was of interest to examine how gender, socioeconomic status (determined by the participant's mother's education level) and race play into participants attitudes toward altruism. In terms of socioeconomic status, there were no significant findings. This means that an individual's level of socioeconomic status does not play into their attitudes toward altruism. For example, a person who is socially considered low class would have no differences in feelings toward altruism as a person who is considered upper class.

When it comes to race, there was a little bit more in terms of findings. Those who identified as "Native American/American Indian", "Asian or Pacific Islander", or "Multiracial" were not found to be significantly different from each other on any of the altruism measures. However, there was one significant finding for those who identify as "Black/African American" on the "Take Care of Yourself and Family First" variable which means that those who identify as "Black/African American" are more likely to agree that people should take care of themselves and their family before helping other people compared to other races. As for those individuals who identified as "White", there were two significant findings on the "Take Care of Yourself and Family First" and "Volunteering to Help Someone is Rewarding" variables. This means that individuals who identify as "White" are more likely to disagree that people should take care of themselves and their family before helping other people and that volunteering to help someone is

very rewarding compared to all other races. It is of special interest to note that the two races that stood out in terms of attitudes toward altruism were those who identify as "White", or arguably the top of the order, and those who identify as "Black/African American", or the bottom of the order. One could possibly think that because "Whites" are at the top of the order, they are less likely to indicate attitudes of altruism than those at the bottom of the order. However, that is not what the data tell us in that "Whites" are more likely to report that they put other people's needs before their own as compared to "Blacks/African Americans". It would be interesting to further investigate if their attitudes toward altruism are different from their actual altruistic behaviors.

Lastly, gender played the biggest role in terms of attitudes toward altruism. There were six variables that indicated a statistically significance between males and females: "Willing to Help Those Less Fortunate", "Other's Misfortunes Do Not Disturb Me", "Volunteering to Help Someone is Rewarding", "People Should Look After Themselves Only", "Willing to Risk Safety to Help Others", AND "Frequency of Money or Items to Charity" ("Other's Misfortunes Do Not Disturb Me" and "People Should Look After Themselves Only" were reversed coded). Those who identified as males respondents are more likely to report that they believe people should be willing to help others who are less fortunate than women. Those who identify as female respondents are more likely to report that other people's misfortunes do not usually disturb them a great deal compared to male respondents. Men report that they are more likely to feel that volunteering to help someone is very rewarding compared to women. Women respondents report that they are more likely to believe that people should look after themselves and not overly worry about others compared to men. Women respondents report that they are more likely to risk their safety to help someone in need compared to men. Finally, men report that they have given more

money or items to charity than women. Based on the comparisons between men and women on the significant altruism measures, it would appear that men overall report more positive feelings toward altruism than females. This is a notable finding in the altruism research given that women are often thought to be more caring and act more altruistically because of how they are socialized in our society. It is important to note that all the measures that indicated significance between men and women were focused on others and strangers and did not specifically point to family members. If kin versus non kin altruism measures were taken into account, these findings could shift and we may see more women reporting altruism attitudes toward family members than men.

Limitations

Although this research study was carefully prepared and executed, there are limitations and shortcomings worth noting. First, the sample set was limited to undergraduate students in a small, urban private school in the Midwest. This does not give us a diverse sample in terms of age because of a majority of the participants were between the ages of 18 and 23, race because a majority of the participants were White, and environmental differences because of the location of the institution being in the Midwest. Also, this sample can not be accurately used as a representation of the national population because of the limited participant sample size.

Second, the measures used to collect the data were originally intended to examine levels of altruism. Measures later had to be changed to focus on participant's self-reported attitudes toward altruism. This indicates an important limitation to the altruism research because it is easier to report and say that you are altruistic versus actually displaying prosocial behavior. If

this study were done using observations instead of self-reports, the results could give an entirely different perspective and conclusions about altruism.

Lastly, the analysis of this study was very basic in terms of statistical work. While the original plan was to use factorial regression analysis to examine how various factors interact with birth order and altruism measures, this analysis was removed due to time limitations and limited understanding of the researcher. Regression analysis would have better controlled for various factors that play into birth order and altruism research, such as demographic information. Future research should further analyze the data to examine relationships amongst the factors that interact with birth order and altruism.

Future Research

Future research would be helpful in order to further explore how birth order interacts with attitudes toward altruism. It would be beneficial to have a larger and more diverse sample. This was very specific in that it used undergraduate students from a small, private University in the Midwest. It would be beneficial to see a larger age range in respondents as well as people who grew up in different places with different environmental context. Also, other researchers should consider using a regression analysis because it allows researchers to account for or control for alternative explanations for the relationship between demographic information, birth order, and attitudes toward altruism. For example, we know that youngest children are more likely to take a risk and be altruistic because this was found in the data. But how does race play into this? Are Black/African American youngest children more likely to take a risk and be altruistic than White youngest children? The same could be asked of gender in that are those who identify as female

and the youngest child more likely to take a risk and be altruistic than those who identify as male and are the youngest child.

Lastly, future research should examine how a person's birth order plays into who they are likely to display prosocial behavior toward, whether that be kin or nonkin. Previous research has shown that first borns are usually the ones taking care of the younger siblings in the family, therefore, the family is likely to receive their help (Salmon, 2003; Daly, 1998). On the other hand, middle borns are more likely to be less close to their parents than any other birth order and more invested in friends and non-kin, which makes it likely that non-kin will receive the altruistic acts over kin (Salmon, 2003). For much of this study, there were two hypotheses that directly aimed to test whether first borns are more likely to be altruistic towards kin than nonkin and if middle borns were more likely to be altruistic toward non kin than kin. These hypotheses had to unfortunately be removed from the study due to time constraints. Since there is much research that examines the receipts of prosocial behavior, it would be beneficial to study kin and nonkin altruism attitudes based on birth order.

CONCLUSION

Prosocial behavior can be seen all around us. Helping behavior is a complex topic and researchers have long investigated how humans engage in prosocial behavior (Hamilton, 1964; Krueger et al., 2001; Kurzban et al., 2015; Maner and Gailliot, 2007; Margolis, 1982; Pilivian and Charng, 1990; Radley and Kennedy, 1995; Simmons, 1991; Trivers, 1971; Warneken and Tomasello, 2009; Winterich et al., 2009). A hot topic for social scientists has been the altruism-egoism controversy. This argument debates whether individuals are truly altruistic or if

their actions are motivated by ulterior motives or gains, such as external and internal rewards (Simmons, 1991). The most recent findings show that altruism is truly a humanistic quality that exists and humans are indeed capable of good deeds (Lipscomb et al., 1982, 1985; Rushton, 1980). Much of prosocial behavior depends, not only on the motivation to be altruistic, but on the relationship that exists between the provider of the behavior and receiver of the help.

Birth order is another topic of discussion that has puzzled social scientists for a long time. It is unclear what exactly a person's ordinal position tells us about their intelligence, personality, and behavior. Adler argued that family and society treat people differently based on their birth order, which essentially determines their treatment and outcome in life (1956c). It has also been argued that people unconsciously make personal decisions based on their beliefs about various birth-order positions and characteristics (Herrera et al., 2003; Olson and Hergenhahn, 2011). While each researcher comes to their own conclusions about characteristics based on birth order, it is generally believed that first borns have the highest academic success, youngest children are social and rebellious, and only children are most likely to be selfish (Eckstein et al., 2010). Some researchers have even examined how risk-taking plays into birth order (Krause et al., 2014) and argue that since youngest born children are the most rebellious, they are the most likely to be risk takers (Sulloway, 1996).

When it comes to altruism attitudes based on an individual's birth order, little to no research has emerged until now. The aim of this study was to investigate how birth order plays into attitudes toward altruism while also considering different factors, such as risk-taking tendencies, family size, race, gender, socioeconomic status. While results did indicate some significance in terms of birth order, race, gender, and family size, much more research needs to

be done. This information could prove to be beneficial for a variety of health and social service professionals.

Clinicians could use the data in terms of understanding the underlying prosocial attitudes of individuals and acknowledging that some people are more willing to risk their health than others in order to help someone in need. Social scientists could use the data in terms of evaluating individual and group altruism attitudes and behaviors based upon their ordinal positions. While birth order research has specialized a variety of theories, this study specifically looks at how individuals relate to one another based upon their birth order. For example, perhaps youngest born children find themselves socializing more with other youngest born children due to their similarity in risk taking attitudes toward altruism. On the other hand, only children may find themselves socializing and creating relationships with other only children on the basis of having less positive attitudes toward altruistic behavior. To put it simply, altruism research that incorporates birth order will help us as a society to better grasp and understand the nature behind different birth order personality types and why one birth order position is likely to take a certain stand on altruistic behavior compared to another. There are an immense amount of possibilities for this research topic. My project solely focused on one part of the birth order and altruism field while considering the intervening variable of risk taking. I am incredibly optimistic to see an increase in the research field regarding altruism, especially taking into account birth order and risk taking tendencies.

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APPENDIX A: Survey Instrument

1. People should be willing to help others who are less fortunate. (OTHSHELP)
    a. Strongly Agree
    b. Agree
    c. Neither Agree nor Disagree
    d. Disagree
    e. Strongly Disagree

2. You should take care of yourself and your family first before helping other people. (FIRSTYOU)
    a. Strongly Agree
    b. Agree
    c. Neither Agree nor Disagree
    d. Disagree
    e. Strongly Disagree

3. People who are better off should help friends who are less well off. (HELPFRDS)
    a. Strongly Agree
    b. Agree
    c. Neither Agree nor Disagree
    d. Disagree
    e. Strongly Disagree

4. Other people's misfortunes do not usually disturb me a great deal. (EMPATHY4)
    a. Strongly Agree
    b. Agree
    c. Neither Agree nor Disagree
    d. Disagree
    e. Strongly Disagree

5. Volunteering to help someone is very rewarding. (VLNTEER)
    a. Strongly Agree
    b. Agree
    c. Neither Agree nor Disagree
    d. Disagree
    e. Strongly Disagree

6. These days people need to look after themselves and not overly worry about others. (SELFFRST)
    a. Strongly Agree
    b. Agree
    c. Neither Agree nor Disagree
    d. Disagree
    e. Strongly Disagree

7. I would rather suffer myself than let a family member suffer. (MESUFFER)
    a. Strongly Agree
    b. Agree
    c. Neither Agree nor Disagree
    d. Disagree
    e. Strongly Disagree

8. I am more willing to help a friend in need rather than a family member in need. (HELPFRND)
    a. Strongly Agree
    b. Agree
    c. Neither Agree nor Disagree
    d. Disagree
    e. Strongly Disagree

9. I am usually willing to sacrifice my own wishes to let a family member achieve his/hers. (FMLYWISH)
    a. Strongly Agree
    b. Agree
    c. Neither Agree nor Disagree
    d. Disagree
    e. Strongly Disagree

10. I am willing to risk my safety in order to help someone in need. (RSKSAFTY)
    a. Strongly Agree
    b. Agree
    c. Neither Agree nor Disagree
    d. Disagree
    e. Strongly Disagree

11. During the past 12 months, how often have you donated blood? (GIVBLOOD)

a. More than once a week
b. Once a week
c. Once a month
d. At least 2 or 3 times in the past year
e. Once in the past year
f. Not at all in the past year

12. During the past 12 months, how often have you given food or money to a homeless person? (GIVHMLSS)
    a. More than once a week
    b. Once a week
    c. Once a month
    d. At least 2 or 3 times in the past year
    e. Once in the past year
    f. Not at all in the past year

13. During the past 12 months, how often have you given money or items to charity? (GIVCHRTY)
    a. More than once a week
    b. Once a week
    c. Once a month
    d. At least 2 or 3 times in the past year
    e. Once in the past year
    f. Not at all in the past year

14. What is your age? (AGE)
    a. 18 years old or younger
    b. 19 years old
    c. 20 years old
    d. 21 years old
    e. 22 years old
    f. 23 years old or older

15. What is your gender? (GENDER)
    a. Male
    b. Female
    c. Other
    d. Prefer not to answer

16. Are you Hispanic/Latino (Of any race)? (HISPLAT)
    a. Yes
    b. No
    c. Prefer not to answer

17. What is your ethnicity or race? (RACEETH)
    a. Black/African American
    b. Native American/American Indian
    c. Asian or Pacific Islander
    d. White
    e. Multiracial
    f. Other
    g. Prefer not to answer

18. How would you describe your religious or spiritual identity? (RELSPIRT)
    a. Hindu
    b. Muslim
    c. Buddhist
    d. Christian
    e. Jewish
    f. Atheist or Agnostic
    g. Other
    h. Prefer not to answer

19. How many siblings were in the household you grew up in, including yourself? (NUMBRSIB)
    a. 1
    b. 2
    c. 3
    d. 4
    e. 5
    f. 6
    g. 7
    h. 8 or more

20. What is your ordinal position in the household you grew up in?
    Ordinal position refers to the actual order in which a child was born in the household. (BRTHORDR)
    a. Only child

b. First born
c. Second Born (but not last)
d. Third Born (but not last)
e. Fourth of more born (but not last)
f. Youngest child

21. What is your class standing at Hamline? (CLASSTND)
    a. First year (<32 credits)
    b. Sophomore (32-64 credits)
    c. Junior (64-96 credits)
    d. Senior (96 credits or more)

22. What is the highest level of education completed by your mother? (MOMEDU)
    a. less than high school diploma
    b. high school graduate
    c. attended some college (no 4 year degree)
    d. college degree (4 year)
    e. attended graduate/professional school
    f. graduate/professional degree(s)

23. What is the highest level of education completed by your father? (DADEDU)
    a. less than high school diploma
    b. high school graduate
    c. attended some college (no 4 year degree)
    d. college degree (4 year)
    e. attended graduate/professional school
    f. graduate/professional degree(s)

24. What was your parents' total household income last year? (PINCOME)
    a. 20,00 or less
    b. 20k-50k
    c. 51k-75k
    d. 76k-100k
    e. 101k-150k
    f. 151k-200k
    g. 201k-250k
    h. 251k-300k
    i. 301k or more
    j. I'm not sure