

FINANCIAL PERSPECTIVES OF EMERGING ADULTS: SIMILARITIES AND
DIFFERENCES BETWEEN GEN-ZEDS AND MILLENNIALS

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ABSTRACT

Emerging adults (individuals ages 18-24) today are struggling with finance. In fact, financial factors make up four of the top five stressors of college students today (Sinha et al., 2018) while, at the same time, much research has shown these populations lack the financial skills necessary to make even the most basic financial decisions (Serido & Deenanath, 2016; Shim, Serido, Bosch, & Tang, 2013; Terriquez & Gurantz, 2014). The problem does not seem to be related to a lack of resources, as there are currently more tools to help one improve financial literacy than ever before (Sinha, Tan, & Zhan, 2018). Perhaps roots of the problem stem from development. In 2011, Gudmonson and Danes founded a theory of financial socialization, claiming that financial development stems primarily from implicit and explicit lessons provided by one's parents or guardians. This study dives into the financial perspectives of Millennials and Generation Z, attempting to cypher out commonalities and differences in financial development, knowledge, value, and anxiety between and within the generations. Major findings include differences between financial perspectives based on gender, social class, and political orientation. Adding to Gudmonson and Danes' (2011) financial socialization theory, major differences were found in financial literacy and anxiety based on sibling birth order. These results suggest that siblings may directly or indirectly affect one's financial socialization by influencing or supplementing parents' explicit and implicit financial lessons. The study concludes with ideas for future research.

Keywords: Emerging adults, Financial Socialization, Financial Development, Generation Z, Millennials, Financial Literacy, Financial Anxiety

INTRODUCTION

An abundance of research suggests that improving the financial capabilities of younger generations leads to improved well-being at the individual level (Johnson & Sherraden, 2007; Loke, Choi, & Libby, 2015). However, there is an overwhelming amount of evidence that highlights the gaps in the financial education and financial literacy of current young adults around the world (McCormick, 2009; Serido & Deenanath, 2016; Shim, Serido, Bosch, & Tang, 2013; Terriquez & Gurantz, 2014). Accordingly, this study aims to explore how current young adults compare to the previous young adult generation in financial development, perspectives, and literacy. Given the dearth of information in this area, this exploration is a key step in recognizing how financial independence and beliefs about finances are developmental issues with developmental implications.

A Developmental Shift

In the United States, definitions of adult status are ill-defined and context dependent. At 18 you can serve in the military, but you can't legally buy alcohol; at 15 you can be charged as an adult in a court of law, but you can't buy a lottery ticket. Adding to this complexity, cultural and societal shifts, over time, have changed our ideas of when young people should be expected to maintain adult roles and financial independence. These changing ideas and norms have been reflected in developmental psychology. For example, throughout most of the 20th century, the period between ages 10-18 was referred to as adolescence, whereas the ages 18-25 were deemed young adulthood. Yet, within industrialized societies, patterns of a "prolonged adolescence" were noticed dating back to the 1960's by prestigious scholars such as Erik Erikson, Daniel Levinson, and Kenneth Keniston (as cited by Arnett, 2000). All three developmental theorists

found a pattern of heightened instability and self-exploration due to extended periods of education (Arnett, 2000). Individuals in their late-teens and early-twenties were not collectively marrying off and having children as was the norm for previous generations at these ages.

Enrollment in tertiary education in these advanced societies grew exponentially throughout the late-80's and 90's. In the mid-to-late 1990's, Arnett dove into developmental shifts in young adults that related to cultural and societal changes such as extended education. He found evidence of adulthood-related milestones being pushed off by individuals 18 to 25 years of age. For example, in 1994, only 40% of individuals within this age group were moved out of their parents' houses, living independently, and working full-time jobs (as cited by Arnett, 2000). Subjectively, most 18-to-25-year-olds believed they had not reached adulthood, whereas most individuals in their thirties did (as cited in Arnett, 2000). Cultural and developmental shifts created a distinct period between adolescence and adulthood.

Emerging Adulthood

Diving into these objective and subjective differences, Arnett (2000) described the period between the ages 18 and 25 as separate from adolescence and adulthood, coining the newly theorized life-stage "Emerging Adulthood." He argued that the two central processes within this novel developmental stage are the passage of individuals from education to employment and relationship changes that occur after moving out of the nest. The passage from education to employment involves advanced autonomy compared to adolescents (Arnett, 2000). This autonomy is often tied to higher working-hours, higher wages, and more spending power.

Arnett's (2000) research found that emerging adults have three subjective goals they believe must be fulfilled to reach adulthood: accepting responsibility for one's self, independent decision-making, and financial independence. Compared to the two central processes, these

three common emerging adult goals seem to be most related to advancing from education to employment. Full-time employment generally results in financial independence, which may relate to the other two goals in the form of overall, greater independence. Once these three goals are attained, only then does an emerging adult reach a developmental change towards young adulthood (Arnett, 2000). Hence, the goal of reaching financial independence is very important in the development of emerging adults all around the world.

It is important to keep in mind that Arnett's (2000) novel stage of emerging adulthood is not universal. In a 1991 study, Shlegel and Barry found that only 20% of 186 non-Westernized cultures experienced a period of exploration between adolescence and adulthood (as cited by Arnett, 2000). Members of these cultures often marry in their late teens and even have children around age twenty. Arnett (2000) explains that minorities, certain cultural and lower-income groups within westernized societies may experience a shortened or complete lack of emerging adulthood. Therefore, those who experience emerging adulthood tend to come from privileged backgrounds in westernized societies.

A Financial Problem

Despite the advancement and availability of financial tools, the internet, and education within high schools that potentially increase individuals' financial capabilities (Sinha, Tan, & Zhan, 2018), younger adult generations are struggling with their finances. Economic trends suggest that financial self-sufficiency has become a more difficult achievement for young people who are often forced to "boomerang" in and out of their parents' homes just to stay afloat (Goldscheider & Goldscheider, 1994). How is this hardship in achieving major developmental goals affecting the current emerging adult generations and how might this compare to the development of those young adult generations who preceded them?

There are currently two generational cohorts that are emerging adults: Generation Z and Millennials. According to PEW Research (Dimock, 2019), Generation Z individuals were born from 1997 to 2013 and are currently ages 7-22. Gen-Z individuals are just entering emerging adulthood and, therefore, we will be focusing on those currently 18 to 22 years old. Millennials were born from 1981 to 1996 and are currently ages 23 to 38 (Dimock, 2019). Since the last cohorts of Millennials will soon turn 26, most of the recent literature on emerging adulthood has involved Millennials as subjects. The other living adult generations include Generation X (ages 39-54), Baby Boomers (ages 55-73), and the Silent Generation (ages 74-91) (Dimock, 2019). Arnett's research implies that the first generations in which most individuals experienced emerging adulthood (as opposed to an earlier, young adulthood) included the Gen-X, Millennials, and Gen-Z. Comparing the latest emerging adult generations is necessary in understanding how adults continue to cope with the changes associated with this novel lifestyle.

Financial Literacy

Sinha et al. (2018) described financial independence within emerging adulthood as often being tied to financial literacy and socialization molded by parents, families, educational institutions, and individuals' socio-demographics. Many studies on Millennial emerging adults showed that young people of this generation lacked the financial skills necessary to make basic, important financial decisions (Serido & Deenanath, 2016; Shim, Serido, Bosch, & Tang, 2013; Terriquez & Gurantz, 2014). Current emerging adults are having trouble achieving financial independence, part of a process that developmental psychologists describe as central to this stage of identity-formation. Research on Millennials, for example, suggests that individuals of this generation lacked basic financial literacy as emerging adults, yet society considers those 18 and older to be capable, financial decision-makers (Sinha et al., 2018). A mismatch between

financial literacy and what is expected of young individuals may account for financial struggles for previous, current, and future emerging adults. Diving into emerging adults' sources of financial knowledge is imperative to ensuring that current and future emerging adult generations experience timely developmental transitions into young adulthood.

Financial Stress for Emerging Adults

Current emerging adult generations are also very stressed and anxious about their finances. Financial factors are the top four out of five stressors of college students (Sinha et al., 2018). A large part of this stress is due to the overwhelming cost of college tuition across the world, leading some to commit to repayment plans that can last anywhere from 20 to 30 years. There are recent empirical studies showing that, over time, financial stress raises the risks of depression and other mental health issues (Eisenberg et al., 2001; McCormick, 2009). There is also evidence that high stress levels and poor academic outcomes are influenced by emerging adults' low financial literacy (as cited in Sinha et al., 2018). The current emerging adult populations, Generation Z and Millennials, lack financial knowledge and are highly stressed about finances. Expanding the research literature upon topics such as financial literacy and financial interest in emerging adulthood would benefit the well-being of future generations.

The Current Research Project

Despite the lack of knowledge and the apparent stress, many young people show a propensity toward financially healthy behaviors such as saving money over time (TD Ameritrade, 2012). Psychologists, however, have yet to explore what differentiates emerging adults who actively think about and engage in financial decision-making and those who do not. These differences could also prove important in the advancement of financial education and the attenuation of stress levels of the future emerging adult populations.

Three major research questions stand out from the reading above. The first is a question of knowledge and value. Are members of the Generation Z adult population less knowledgeable about finance than Millennials and, if so, how interested are they in improving their knowledge? The second question focuses on affect; is the current emerging adult population more anxious about money, investing, and the stock market compared to the Millennials? Third, how might socio-demographics interact or influence questions one and two? Moving forward, these questions may provide ways to help increase the financial health, confidence, and well-being of emerging adults.

Ecological Context of Development

Bronfenbrenner's (1986) ecological systems theory states that individuals are situated in a series of contexts that vary in proximity. He defined his theoretical ecology as the relationship between a person and the changing environment in which said human lives throughout the lifespan (Bronfenbrenner, 1977). The distinct levels of the theory are described by proximity to the self, or the human organism. The microsystem, for example, includes the specific setting a person is in and involves direct interactions. The mesosystem includes the various settings and the interrelations between the settings a person experiences throughout life. The exosystem is comprised of formal and informal social structures that influence the various settings an individual encounters, such as laws, the media, a neighborhood, etc. The macrosystem includes the over-arching institutions of society that influence entire cultures such as economic, political, social, and educational systems (Bronfenbrenner, 1977). Personal relationships may directly influence development while, at a more macro-level, the zeitgeist of the times also plays a significant role.

Ecological systems theory has been used to account for financial development, placing emphasis on the roles that families take on within the microsystem regarding beliefs, values, and behaviors related to financial independence or dependence (LeBaron, Hill, Rosa, & Marks, 2018). These micro-level, more unique experiences interact with all other levels, up to the macrosystem. For example, harsh times during the 2008 Financial Crisis may have directly affected individuals' parenting styles as thousands lost their jobs. Perhaps parents became stingier or stressed during these times, possibly leading to more authoritarian parenting. This example shows how the macrosystem influences part of the microsystem (an individual's parents) in ways which will influence development.

Financial Socialization

Parenting seems to have major effects on the financial knowledge and choices of children, adolescents, and emerging adults. According to Bandura's social learning theory, human behavior is learned through observing others' behavior (as cited in LeBaron et al., 2018). Children often observe their parents' behaviors more than any other humans. Therefore, parental modeling may be the primary way in which children, adolescents, and emerging adults learn financial behaviors.

In 2011, Gudmunson and Danes founded financial socialization theory. The theory posits that family has the greatest influence on financial development through two major processes. These two processes are carried out primarily by parents and include explicit and implicit education (Gudmunson & Danes, 2011). Explicit financial education is often discussion-based and includes purposeful conversation parents have with their children on various aspects of finance. Parents also do non-discussion-based, implicit educating through experiences they provide their children, such as creating a bank account for their child at an early age. Adults

citing more explicit educational actions by their parents have been shown to have less credit card debt (Grinstein-Weiss et al., 2011; Norvilitis & MacLean, 2010), higher credit scores (Grinstein-Weiss et al., 2012), higher rates of investing (Hira, Sabri, & Loibl, 2013), and lower rates of home foreclosures (Grinstein-Weiss et al., 2012). The content of these financial discussions appears to directly influence long-term financial outcomes for children.

LeBaron et al. (2018) used the three theories discussed above (ecological systems, social learning, financial socialization) to create a framework to guide their multi-generational, qualitative exploration of financial socialization within families. They found that parental-driven financial socialization involved modeling, in which children observed and later emulated the financial behaviors of their parents, discussion, through which parents explicitly attempted to teach their children financial lessons, and experiential learning (LeBaron et al., 2018). Experiential learning involved parents providing their children with opportunities to have hands-on financial experiences, such as opening a child's first bank account at an early age. The researchers also found four themes of financial lessons parents taught their children: financial planning, work ethic, money management, and sharing (LeBaron et al., 2018). The authors also refer to Fernandes, Lynch, and Netemeyer's meta-analysis which found that financial education in present-day academic institutions has low impacts on students' behavior (as cited by LeBaron et al., 2018). These findings highlight the importance parents play in individual's financial development as compared to institutional education.

Building on this work, financial affect might be related to the macro-system, influencing all levels in a top-down manner, heavily influencing the microsystem in which the self develops. At the same time, parents may model financial affect differently, depending on the state of the economy and fluctuations throughout their careers. According to Apprisen (2019), different

generations have experienced different financial hardships depending on macro-level historical context and how it related to the microsystem. Baby Boomers experienced a flourishing economy after the end of World War II, leading to high-income levels. High incomes developed habits of spending for wants over needs and the overuse of credit. Saving and investing were not of much importance to Baby Boomers (Apprisen, 2019). Generation X grew up in settings dominated by two-incomes, raising divorce rates, and daycare, leading to a higher valuing of independence. This independence led to individuals taking more control of their finances (Apprisen, 2019). Millennials experienced one of the greatest financial disasters in history when they were children to young adults and they have more average credit card debt than their parents and grandparents when they were young adults (as cited by Apprisen, 2019), but have the most financial tools of any previous adult generation (Apprisen, 2019). Generation Z's unique perceptions of the 2008 Financial Crisis and other macro-level experiences are largely unknown, as they are just reaching college-age.

A Framework for this Study

Ecological systems, social learning, and financial socialization theory will act as a framework to guide the current research project. The focal population of this project includes members of Generation Z, most of the current emerging adult population. To dive into Generation Z's financial knowledge, values, and affect, we needed to set a baseline for comparison. This baseline includes current perceptions of Millennials and Gen-Zeds on the same financial topics. Accordingly, Study 1 includes a survey on the financial knowledge, values, and affect experienced by Generation Z and Millennials as experienced today. A strong focal point is placed on socio-demographics, allowing us to explore individual differences across generations. In Study 2, the principal researcher probes on topics related to the above survey

through qualitative interviews of only Generation Z subjects. Findings within Study 2 provide rich and nuanced information about Generation Z's views on financial topics such as money, investing, and the stock market. Implications that might prove useful in improving the financial knowledge, health, and future of the generation as well as generations to come are then discussed.

Hypotheses

Hypothesis 1: We expected to find a generational gap in financial literacy. According to Lusardi and Mitchell (2011), financial knowledge follows a U-shaped pattern; the youngest and oldest groups tend to have the lowest scores and the middle-aged tend to have the highest scores. We expected Millennials to score higher on financial literacy, on average, than members of Generation Z.

Hypothesis 2: We expected participants to report similar developmental patterns of gaining financial knowledge.

Based on the findings of LeBaron et al. (2018), Bandura's (as cited by LeBaron et al., 2018) social learning theory, and Gudmunson and Danes' (2011) financial socialization theory, we expect most subjects to cite their parents as the sources of their financial literacy. We further expected to see similar themes of parental teaching methods (modeling, discussion, and experiential learning) and financial principles emphasized by parents (financial planning, work ethic, money management, and sharing) as found in LeBaron et al. (2018).

Hypothesis 3: There would be individual differences across generations based on education and other demographic variables.

The influence of socio-demographics was expected to vary depending on a multitude of factors. Higher education has been shown to predict higher investment income, higher credit scores, lower declarations of bankruptcy, and less experiences of foreclosure (Cole, Paulson, & Shastry, 2014). Both the quantitative survey (Study 1) and the qualitative interviews (Study 2) measured participants' highest level of education, and that of each parent/guardian.

We expected to find those with higher education within their family to describe the sources of their financial knowledge as family-related and to have higher financial literacy ratings. Personal and parental education may directly relate to financial experiences that provide individuals advantages in advancing their own financial prowess early in life. For example, owning a bank account earlier in early life correlates with accumulating savings, higher investment diversification, and the maintenance of relationships with financial institutions over the long run (Friedline & Elliot, 2013; Friedline, Johnson, & Hughes, 2014). Therefore, Generation Z individuals whose parents achieved prominent levels of education may have advanced knowledge, experiences, and less stress associated with finance than those with less educated parents.

Other demographics of interest include gender, race, ethnicity, birth order, and socioeconomic status, though specific predictions were not made given the limited research in this area.

Hypothesis 4: We expected that Generation Z would report more anxiety about financial topics than Millennials.

According to Winch, Moberly, and Dickson (2015), anxiety is directly related to pursuing goals for avoiding negative outcomes. Emerging adults may work to avoid negative financial outcomes such as long-term financial dependence. With financial independence as a

major goal for this population (Arnett, 2002), the high student loans of today act to set individuals back financially for years. Loan debt coupled with the stress of entering the workforce, and therefore, the financial arena, may lead to higher anxiety levels in emerging adults compared to the older adult generations. Since emerging adults are generally beginning to take on financial stressors compared to when they were adolescents, we believe this shift is a particularly stressful time. For these reasons, we expected that Generation Z would be more anxious and nervous about financial topics than Millennials.

Given the inductive nature of the qualitative portion of this study, no hypotheses were proposed. The purpose of the interview is to better understand how individuals in Generation Z think about themselves and the world through a financial lens.

Study 1: Quantitative Survey

METHOD

Participants. 465 participants who were at least 18 years of age completed the online survey in Study 1. Of these 465, 314 female, 93 males, and 6 non-binary participants were Gen-Zeds (N = 413). The remaining 33 females and 19 males were Millennials (N = 52). These participants were recruited from SUNY New Paltz and various social medias including but not limited to Facebook and Reddit.

Measures. Participants were asked to complete a survey constructed using Qualtrics which opened with 9 questions on socio-demographics such as gender, political orientation, parental education, and personal education (See Table 1 with associated questions found in Appendix A).

Following questions on socio-demographics, subjects were asked 21 questions focusing on their financial literacy, their sources of this knowledge, subjects' affectual response to finance, and how they value financial concepts such as money, investment, and the stock market. Of these 21 questions on financial perspectives/literacy, 18 were 5-item, Likert-style questions, ranging from strongly disagree to strongly agree. The questions were created by the principal investigator. These questions focused on aspects of financial knowledge (9 questions total; including the source of financial knowledge subjects' willingness to improve their financial knowledge, and subjects' perspectives on their own and their parents' financial literacy. The last 3 questions of this survey measured financial literacy and were directly taken from Lusardi and Mitchell's (2011) three-question Financial Literacy Scale. The three questions specifically test one's basic knowledge on the financial concepts of interest, inflation, and investment. The 18, 5-item, Likert-style questions can be found in Appendix B. Lusardi and Mitchell's (2011) Financial Literacy Scale can be found in Appendix C.

RESULTS

Descriptive statistics based on generation were analyzed prior to conducting analyses (results can be found in Table 1). Within this section, results will be organized as follows: Factor Analysis, Overall Data, Millennials, Generation Z, and Between-Generation Analyses.

Table 1

*Sociodemographic Characteristics of Participants by Generation
(Gen-Z and Millennials)*

Characteristic	Generation Z		Millennials	
	<i>n</i>	%	<i>n</i>	%
Gender				
Male	93	23	18	35

Female	314	76	33	63
Political orientation				
Very conservative	5	1	1	2
Conservative	33	8	7	13
Moderate	109	27	17	32
Liberal	181	44	15	28
Very liberal	63	15	9	17
Family social class				
Upper class	5	1	1	2
Upper middleclass	84	20	12	23
Middleclass	188	46	22	42
Lower middleclass	99	24	14	26
Lower class	36	9	3	6
Highest Education				
High school/GED	107	26	4	8
University or postgraduate	297	72	47	90
Mother's Highest Education				
High school/GED	79	19	14	26
University or postgraduate	277	69	31	69
Father's Highest Education				
High school/GED	92	22	11	21
University or postgraduate	243	59	28	52
Birth Order				
Oldest	121	29	22	42
Middle	84	20	12	23
Youngest	172	42	12	23
Only child	34	8	6	11

Note. Generation Z participants were on average 20.7 years old ($n = 412$).

Millennial participants were on average 27.8 years old ($n = 52$).

Factor Analysis. Scores from Lusardi and Mitchell's (2011) Financial Literacy Scale acted as a primary dependent variable. The 14 Likert-style questions within the survey were subjected to a factor analysis using the principal axis method of extraction to see if the items corresponded to multiple factors. These 14 questions were selected because they seemed the most related to financial knowledge, financial value, and financial anxiety. The analysis extracted three factors with eigenvalues greater than 1.0. The first factor accounted for 15.93%

of total variability in scores, the second accounted for 8.25% of variability in scores, and the third accounted for 5.40% of variability in scores.

The rotated factor loading table (see Table 2; based on the SPSS VARIMAX rotation) suggests that the first factor corresponds to *Financial Knowledge from Family*, or *FKF* (with higher scores for items such as *when I was a child, my parents made an effort to teach me about finance* and *I learned about finance by observing family members' financial behaviors*). The second factor corresponds to *Valuing Finance*, or *Financial Value* (with higher scores for items such as *I would like to improve my knowledge of finances and/or investing* and *learning about financial investment early on in life will prove beneficial in the long run*). Lastly, the third factor corresponds to *Financial Anxiety* (with higher scores for items such as *I often feel nervous when thinking about my finances* and *I feel anxious when I think or hear about the stock market*). The scores of all items within each factor were then added up, creating three continuous, dependent variables (FKF, financial value, and financial anxiety scores with associated questions can be found in Table 2 and Appendix D). These variables, along with financial literacy scores, act as the primary outcome variables within this study.

Table 2
Pattern and Structure Matrix for PAF with Varimax Rotation of Three Factor Solution of Financial Perspective Items

Item	FKF	Financial Value	Financial Anxiety
When I was a child, my parents made an effort to teach me about finance.	.827		
My parents taught me a lot about money management.	.812		
My parents are/were good with money.	.584		
I learned about finance by	.495		

observing family members' financial behaviors (e.g. siblings, parents, guardians, extended family, etc.).		
I would like to improve my knowledge of finance and/or investing.	.643	
Learning about financial investment early on in life will prove beneficial in the long run.	.622	
I often feel nervous when thinking about my finances.		.589
I feel anxious when I think or hear about the stock market.		.570
When I think of the stock market, I often think about the 2008 Financial Crisis.		.340

Note: minor loadings for each item are left out.

Overall Data

The following analyses measure patterns across all 465 participants.

Correlations between Dependent Variables. The relationships between FKF, financial value, financial anxiety, and financial literacy scores were investigated. Preliminary analyses were performed to ensure no violation of the assumptions of normality, linearity, and homoscedasticity for all correlational analysis within this study. There was a small, positive correlation between financial literacy and FKF scores, $r = 0.13$, $n = 460$, $p = 0.006$, with those higher FKF scores associated with higher financial literacy scores. Therefore, those participants that rated themselves as learning more from their family about finance tended to do better on the financial literacy scale. There was also a small, positive correlation between financial literacy

and financial value scores, $r = 0.17$, $n = 459$, $p = 0.000$, with higher financial value scores associated with higher scores in financial literacy. There was also a very small, negative correlation between financial literacy and financial anxiety scores, $r = -0.10$, $n = 457$, $p = 0.03$, with higher financial anxiety scores associated with lower financial literacy scores.

Between the 3 factors above, there was only a small, positive correlation between FKF and financial value scores, $r = 0.18$, $n = 462$, $p = 0.000$, with higher FKF scores associated with higher scores in financial value. There were no other significant relationships between FKF, financial value, or financial anxiety. All correlations between the four dependent measures across Generation and Gender can be found in Table 3 below.

Table 3
Means, Standard Deviations, and Correlations between the Factors for all Populations (by Generation and Gender)

Variable	<i>M</i>	<i>SD</i>	1	2	3	4
All Participants						
1. Literacy	1.41	0.95	-			
2. FKF	13.64	3.68	.13**	-		
3. Value	8.59	1.44	.17**	.18**	-	
4. Anxiety	10.06	2.37	-.10*	-.03	.03	-
Variable	<i>M</i>	<i>SD</i>	1	2	3	4
All Males						
1. Literacy	1.91	0.99	-			
2. FKF	14.20	3.94	.09	-		
3. Value	8.71	1.58	.32**	.32**	-	
4. Anxiety	8.88	2.51	-.07	-.03	.06	-
Variable	<i>M</i>	<i>SD</i>	1	2	3	4
All Females						
1. Literacy	1.25	0.87	-			
2. FKF	13.51	3.58	.12*	-		
3. Value	8.54	1.40	.11*	.12*	-	
4. Anxiety	10.37	2.23	-.01	.01	.04	-
Variable	<i>M</i>	<i>SD</i>	1	2	3	4
All Millennials						
1. Literacy	1.76	0.95	-			
2. FKF	13.50	3.58	.19	-		
3. Value	8.63	1.17	.27	-.003	-	
4. Anxiety	9.77	2.09	-.24	.05	.002	-

Variable	<i>M</i>	<i>SD</i>	1	2	3	4
Millennial Males						
1. Literacy	1.89	1.08	-			
2. FKF	14.78	3.02	.30	-		
3. Value	8.82	1.38	.27	-.14	-	
4. Anxiety	8.83	2.31	-.06	.46	.20	-
Variable	<i>M</i>	<i>SD</i>	1	2	3	4
Millennial Females						
1. Literacy	1.66	0.87	-			
2. FKF	12.82	3.76	.11	-		
3. Value	8.51	1.06	.24	.01	-	
4. Anxiety	10.18	1.78	-.46**	-.01	-.12	-
Variable	<i>M</i>	<i>SD</i>	1	2	3	4
All Gen-Zeds						
1. Literacy	1.37	0.94	-			
2. FKF	13.66	3.69	.12*	-		
3. Value	8.58	1.47	.16**	.20**	-	
4. Anxiety	10.09	2.42	-.08	-.04	.03	-
Variable	<i>M</i>	<i>SD</i>	1	2	3	4
Gen-Z Males						
1. Literacy	1.92	0.98	-			
2. FKF	14.09	4.09	.06	-		
3. Value	8.69	1.62	.32**	.36**	-	
4. Anxiety	8.89	2.56	-.08	-.09	.03	-
Variable	<i>M</i>	<i>SD</i>	1	2	3	4
Gen-Z Females						
1. Literacy	1.20	0.86	-			
2. FKF	13.58	3.56	.13*	-		
3. Value	8.55	1.43	.10	.13*	-	
4. Anxiety	10.41	2.27	.02	.01	.05	-

Note. *M* and *SD* are used to represent mean and standard deviation, respectively. The variables listed literacy, value, and anxiety correspond to the dependent measures Financial Literacy, Financial Value, and Financial Anxiety.

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

Gender and Socio-Demographics. An independent-samples t-test was conducted to compare scores in financial anxiety between males and females. There was a significant difference between males ($M = 8.88$, $SD = 2.51$) and females ($M = 10.39$, $SD = 2.23$; $t(455) = -5.95$, $p = 0.000$, two-tailed). Therefore, females scored significantly higher in financial anxiety compared to males. The magnitude of the differences in the means was moderate ($\eta^2 = 0.07$).

ANOVA. A one-way between-groups analysis of variance was then conducted to explore the impact of political orientation on financial anxiety scores. There were five political orientation groups (very liberal, liberal, moderate, conservative, and very conservative). There was a significant difference in the scores between the groups, $F(4, 431) = 8.58, p = 0.000, \eta^2 = 0.07$. Post-hoc comparisons using the Tukey HSD test indicated that financial anxiety scores for the very conservative group ($M = 8.17, SD = 2.40$) differed from very liberal group scores ($M = 11.03, SD = 2.37$). Scores of the conservative group ($M = 14.17, SD = 3.44$) were statistically different from the liberal ($M = 10.33, SD = 2.15$) and very liberal ($M = 11.03, SD = 2.37$) groups. Financial anxiety scores for the moderate group ($M = 9.71, SD = 2.27$) were also significantly different from the very liberal group ($M = 11.03, SD = 2.37$).

A one-way between-groups analysis of variance was then conducted to explore the impact of social class on financial literacy scores. There were five social class groups (upper class, upper middleclass, middleclass, lower middleclass, and lower class). Though the assumption of homogeneity of variances was violated, a Welch test of equality of means was conducted, finding a significant difference in scores between the groups, $F(4, 455) = 5.77, p = 0.001, \eta^2 = 0.04$. Post-hoc comparisons were completed using the Games-Howell test. The mean score for the upper middleclass ($M = 1.65, SD = 0.95$) was significantly different from the lower middleclass ($M = 1.24, SD = 0.97$) and lower class ($M = 1.05, SD = 0.76$). The middleclass ($M = 1.49, SD = 0.94$) scores also differed from the lower class ($M = 1.05, SD = 0.76$).

A one-way between-groups analysis of variance was then conducted to explore the impact of social class on FKF scores. There were five social class groups (upper class, upper middleclass, middleclass, lower middleclass, and lower class). Though the assumption of

homogeneity of variances was violated, a Welch test of equality of means was conducted, finding a significant difference in scores between the groups, $F(4, 458) = 2.98, p = 0.033, \eta^2 = 0.02$. Post-hoc comparisons were completed using the Games-Howell test. The mean score for the upper middleclass ($M = 14.51, SD = 3.65$) was significantly different from the lower middleclass ($M = 13.13, SD = 3.41$) and lower class ($M = 12.21, SD = 4.31$) such that the upper middleclass individuals displayed higher FKF scores than both lower middleclass and lower class participants.

A one-way between-groups analysis of variance was then conducted to explore the impact of social class on financial anxiety scores. There were five social class groups (upper class, upper middleclass, middleclass, lower middleclass, and lower class). There was a significant difference in scores between the groups, $F(4, 455) = 2.60, p = 0.036, \eta^2 = 0.022$. Post-hoc comparisons using the Tukey HSD test indicated that financial anxiety scores for the upper class ($M = 7.33, SD = 2.94$) were significantly different from the middleclass ($M = 10.03, SD = 2.30$), the lower middleclass ($M = 10.34, SD = 2.26$), and lower class ($M = 10.26, SD = 2.76$). Therefore, participants in the upper class scored significantly lower on financial anxiety scores compared to the lower classes.

A two-way between-groups analysis of variance was conducted to explore the impact of gender and sibling birth order (oldest, in the middle, youngest, or only child) on financial anxiety scores. The ANOVA revealed a significant main effect for gender, $F(1, 446) = 19.01, p = 0.000, \eta^2 = 0.04$, and for sibling birth order, $F(3, 446) = 2.98, p = 0.03, \eta^2 = 0.02$. In addition to these main effects, a significant interaction between these variables was observed, $F(3, 446) = 2.84, p = 0.04, \eta^2 = 0.02$ (the interaction is clearly shown in Figure 1).

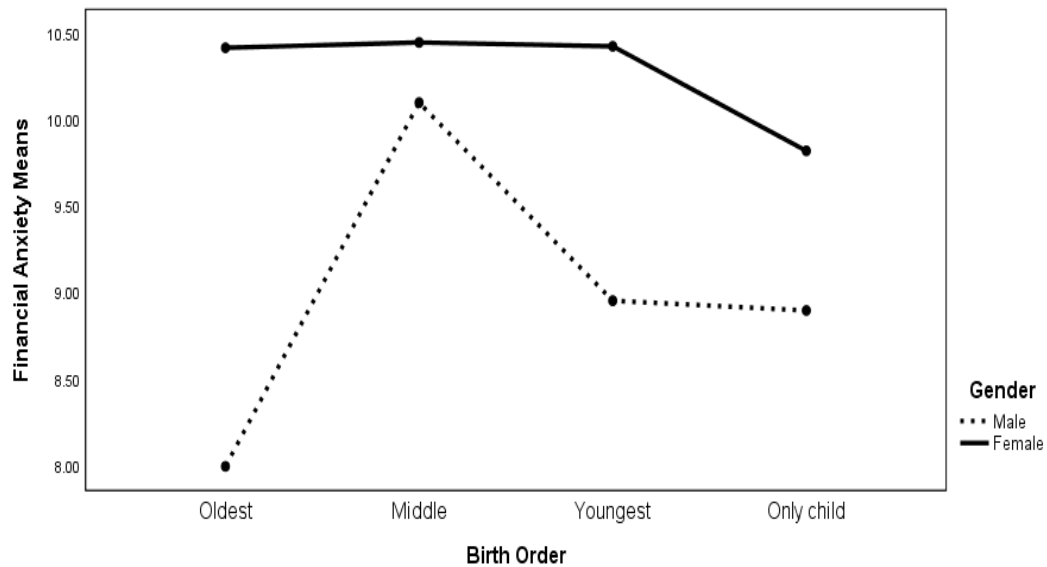


Figure 1.

Mean Financial Anxiety Scores by Birth Order and Gender

To address whether the eight means are different from one another, a one-way ANOVA was computed. To conduct this ANOVA, eight groups were created. These groups included males who were the oldest the oldest of their siblings (oldest males), a middle sibling (middle males), the youngest (youngest males), only-child males, females who were the oldest sibling (oldest females), who were middle siblings (middle females), youngest siblings (youngest females), and only-child females. A one-way ANOVA was then computed to see if the means across those eight groups differed. The analysis revealed a significant overall, one-way effect, $F(7, 446) = 35.61, p = 0.000, \eta^2 = 0.10$.

Post-hoc comparisons using the Tukey HSD test indicated that mean financial anxiety scores for the oldest male group ($M = 8.00, SD = 2.54$) differed from middle males ($M = 10.10, SD = 0.99$), oldest females ($M = 10.42, SD = 2.36$), middle females ($M = 10.45, SD = 2.11$),

youngest females ($M = 10.43$, $SD = 2.20$), and only-child females ($M = 9.82$, $SD = 2.13$). The oldest males reported less financial anxiety than all of these groups. Mean financial anxiety scores of youngest males ($M = 8.92$, $SD = 0.99$) also differed from oldest females, middle females, and youngest females (see means above). The youngest males also reported less financial anxiety than all female groups.

Millennials

There was a total of 52 Millennial participants, including 33 females and 19 males.

Correlations between Dependent Variables. The relationship between financial literacy, FKF, financial value, and financial anxiety scores for Millennials was investigated using the Pearson product-moment correlation coefficient. For the entire Millennial sample, there were no significant relationships found between these variables.

Gender Differences. Independent-samples t-tests were conducted to compare dependent variable scores between Millennial males and females. For FKF scores, measuring financial knowledge attained from family, the difference between males ($M = 14.78$, $SD = 3.02$) and females ($M = 12.82$, $SD = 3.76$) was marginally significant, $t(51) = 1.90$, $p = 0.06$, two-tailed. Millennial males scored higher than females, meaning that males attributed their financial knowledge coming from their family more than females. For financial anxiety scores, there was a significant difference between males ($M = 8.83$, $SD = 2.31$) and females ($M = 10.18$, $SD = 1.78$; $t(51) = -2.33$, $p = 0.024$, two-tailed). Therefore, Millennial females scored significantly higher in financial anxiety than Millennial males. The magnitude of the differences in the means was moderate ($\eta^2 = 0.10$).

The relationship between financial literacy, FKF, financial value, financial anxiety scores, and gender was investigated using the Pearson product-moment correlation coefficient. There was a moderate, positive relationship between financial anxiety scores and gender, $r = 0.37$, $n = 52$, $p = 0.008$, with higher financial anxiety scores associated with females. No relationships were found within the Millennial male scores and the four, main dependent variables possibly due to the small sample size ($n = 19$).

Similar correlational analyses were run after splitting the data by gender. The only significant relationship found for Millennial females within the four dependent variables was between financial literacy and financial anxiety scores, $r = -0.46$, $n = 32$, $p = 0.008$. Therefore, those female Millennials who scored higher in the financial anxiety measure tended to score lower on the financial literacy scale. No significant relationships were found between the variables for male Millennials.

Generation Z

Correlations between Dependent Variables. The relationship between financial literacy, FKF, financial value, and financial anxiety scores for Gen-Zeds was investigated using the Pearson product-moment correlation coefficient. Between financial literacy and FKF scores, there was a small, positive relationship, $r = 0.12$, $n = 409$, $p = 0.01$. Those who attributed their financial knowledge coming from their family more were likely to score higher in financial literacy. A similarly small, positive relationship was found between financial literacy and financial value scores, $r = 0.16$, $n = 409$, $p = 0.001$. Therefore, those who valued finance and financial knowledge more scored higher in financial literacy. There was also a small, positive relationship between FKF and financial value scores, $r = 0.20$, $n = 411$, $p = 0.000$. Those who

attributed financial knowledge coming from their family more were like to also value finance and financial knowledge more.

Socio-Demographics and Dependent Measures. The relationship between mother's education level, father's education level, and the four dependent measures was investigated using the Pearson product-moment correlation coefficient. There was a moderate, positive relationship between participants' mother's and father's highest level of education, $r = 0.46$, $n = 394$, $p = 0.000$. Participants rating their mother's education high were also likely to rate their father's education high. There was a small, positive relationship between participants' father's highest level of education and financial literacy scores, $r = 0.13$, $n = 392$, $p = 0.009$. Perhaps related, there was also a small, positive relationship between participants' father's highest level of education and FKF scores, $r = 0.11$, $n = 408$, $p = 0.027$. Those subjects whose fathers received a higher education tended to score higher on the financial literacy scale and were more likely to attribute their financial knowledge coming from their family.

The relationship between political orientation, family social class, house income, and the four dependent measures was investigated. There was a small, negative relationship between political orientation and FKF scores, $r = -0.16$, $n = 390$, $p = 0.001$, whereas more conservative participants tended to have higher FKF scores. There was a small-to-moderate, positive relationship between political orientation and financial anxiety scores, $r = 0.27$, $n = 387$, $p = 0.000$. Participants who were more liberal tended to also measure higher in financial anxiety. There was a small, negative relationship between social class and financial literacy scores, $r = -0.14$, $n = 409$, $p = 0.006$, whereas participants in the higher social classes performed better on the financial literacy scale. There was a similarly small, negative relationship between social class and FKF scores, $r = -0.16$, $n = 411$, $p = 0.001$. For financial anxiety and social class, there was a

small, positive relationship, $r = 0.12$, $n = 408$, $p = 0.018$, whereas participants in the lower classes tended to score higher in financial anxiety. There was a small, positive relationship between household income and financial literacy scores, $r = 0.15$, $n = 407$, $p = 0.002$, whereas participants with a higher household income tended to also score higher in financial literacy. Household income had a moderate, positive relationship with FKF scores, $r = 0.30$, $n = 409$, $p = 0.000$. Those with higher household income scored higher on the financial knowledge from family measure.

Gender Differences. Independent-samples t-tests were conducted to compare dependent variable scores between Generation Z males and females. For financial anxiety scores, there was a significant difference between males ($M = 8.89$, $SD = 2.56$) and females ($M = 10.41$, $SD = 2.27$; $t(404) = -5.43$, $p = 0.000$, two-tailed). Therefore, Gen-Z females scored significantly higher in financial anxiety than Gen-Z males. The magnitude of the differences in the means was small ($\eta^2 = 0.07$).

The data was then split by gender to look at specific relationships between the four dependent variables for each gender. For males, there was a moderate, positive relationship between financial literacy and financial value scores, $r = 0.32$, $n = 91$, $p = 0.002$, whereas Gen-Z males who scored higher in financial literacy also tended to score higher in the financial value measure. There was also a moderate, positive relationship between financial value and FKF scores, $r = 0.36$, $n = 93$, $p = 0.000$. For females, there was a small, positive relationship between financial literacy and FKF scores, $r = 0.13$, $n = 314$, $p = 0.02$.

After splitting for gender, the relationship between mother's education level, father's education level, and the four dependent measures was investigated using the Pearson product-moment correlation coefficient. For males, there were no significant relationships. For females,

a small, positive relationship was found between financial literacy and mother's education level, $r = 0.16$, $n = 312$, $p = 0.005$, whereas female participants whose mothers were higher educated tended to have higher scores in financial literacy. There was a similarly small, positive relationship between financial literacy and father's level of education, $r = 0.19$, $n = 300$, $p = 0.001$, whereas female participants whose fathers were more educated tended to have higher scores in financial literacy. FKF scores and mother's education level were positively related, $r = 0.18$, $n = 312$, $p = 0.001$, along with FKF scores and father's education level, $r = 0.14$, $n = 300$, $p = 0.015$. There was also a small, positive correlation between financial anxiety and father's education level, whereas female participants whose fathers had a higher education tended to have higher financial anxiety scores.

The relationship between political orientation, family social class, house income, and the four dependent measures was investigated after splitting the data by gender. For males, there was a moderate, positive relationship between political orientation and financial anxiety, $r = 0.41$, $n = 79$, $p = 0.000$, whereas more liberal males scored higher in the financial anxiety measure. For females, there was a small, positive relationship between the same two variables, $r = 0.18$, $n = 304$, $p = 0.002$, whereas more liberal females also tended to score higher in the financial anxiety measure. Female Gen-Zeds also displayed a small, negative relationship between political orientation and FKF scores, $r = -0.15$, $n = 304$, $p = 0.008$, whereas more conservative females scored higher in the measure.

For males, there was a small, positive relationship between family social class and financial anxiety scores, $r = 0.23$, $n = 90$, $p = 0.03$, whereas males in the lower classes tended to score higher in financial anxiety. For females, there were small, negative relationships between family social class and financial literacy scores, $r = -0.13$, $n = 314$, $p = 0.02$, plus family social

class and FKF scores, $r = 0.17$, $n = 304$, $p = 0.002$, whereas females in the higher classes tended to score higher in financial literacy and FKF scores.

For income, there was a moderate relationship to FKF scores for both males, $r = 0.34$, $n = 93$, $p = 0.001$, and females, $r = 0.29$, $n = 312$, $p = 0.000$, whereas both male and female participants with higher household income scored higher on the FKF measure. There was also a small, positive relationship between household income and financial literacy scores for females, $r = 0.18$, $n = 312$, $p = 0.002$. Females with higher household income tended to score higher on the financial literacy scale.

ANOVA. A two-way between-groups analysis of variance was conducted to explore the impact of gender and family social class on financial literacy scores. The interaction between gender and social class was not significant, $F(4, 394) = 0.218$, $p = 0.929$. There was a statistically significant effect for gender, $F(4, 394) = 14.00$, $p = 0.000$, $\eta^2 = 0.03$. Post-hoc comparisons using the Tukey HSD test indicated that the males ($M = 1.92$, $SD = 0.98$) had higher mean financial literacy scores than females ($M = 1.20$, $SD = 0.87$). There was also a main effect for social class, $F(4, 394) = 3.90$, $p = 0.004$, $\eta^2 = 0.04$. The mean score for upper class participants ($M = 1.65$, $SD = 0.89$) was significantly different from that of both lower middleclass ($M = 1.18$, $SD = 0.89$) and lower class participants ($M = 0.96$, $SD = 0.92$). Upper class participants scored higher on financial literacy compared to both lower middleclass and lower class individuals.

A two-way between-groups analysis of variance was then conducted to explore the impact of family social class and political orientation on FKF scores. The interaction between social class and political orientation was not significant, $F(12, 369) = 1.19$, $p = 0.29$. There was a statistically significant main effect for social class, $F(4, 369) = 5.97$, $p = 0.000$, $\eta^2 = 0.06$. Post-hoc comparisons using the Tukey HSD test indicated that means of upper middleclass

participants ($M = 14.89$, $SD = 3.57$) differed from lower middleclass ($M = 12.23$, $SD = 3.50$) and lower class participants ($M = 12.04$, $SD = 4.31$). The upper middleclass participants scored higher on FKF scores compared to lower middleclass and lower class participants. Middleclass participants ($M = 14.14$, $SD = 3.19$) also differed from lower middleclass and lower class participants (see the above means and standard deviations). Middleclass subjects scored higher on FKF scores than lower middleclass and lower class individuals. There was also a main effect for political orientation, $F(4, 369) = 2.49$, $p = 0.043$, $\eta^2 = 0.03$. Post-hoc comparisons indicated that moderate participants ($M = 14.21$, $SD = 3.27$) differed from very liberal participants ($M = 12.63$, $SD = 3.7$), whereas moderates displayed higher FKF scores than very liberal participants.

A two-way between-groups of analysis of variance was conducted to explore the impact of gender and sibling birth order (oldest, in the middle, youngest, or only child) on financial literacy scores. The ANOVA revealed a significant main effect for gender, $F(1, 396) = 34.40$, $p = 0.000$, $\eta^2 = 0.08$, but not for sibling birth order, $F(3, 396) = 0.52$, $p = 0.672$. However, a significant interaction between these variables was also observed, $F(3, 396) = 2.89$, $p = 0.035$, $\eta^2 = 0.02$. The interaction is clearly represented in Figure 2.

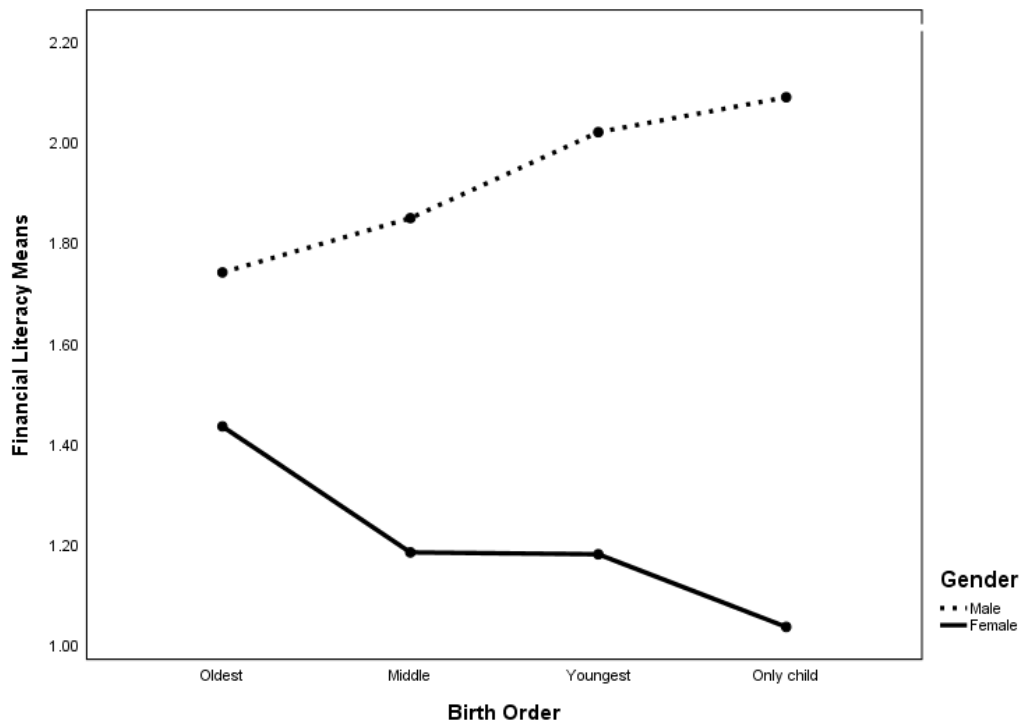


Figure 2.
Mean Financial Literacy Scores by Birth Order and Gender

To address whether the eight means are different from one another, a one-way ANOVA was computed. To conduct this ANOVA, the same eight groups previously discussed were used. These groups included males who were the oldest the oldest of their siblings (oldest males), a middle sibling (middle males), the youngest (youngest males), only-child males, females who were the oldest sibling (oldest females), who were middle siblings (middle females), youngest siblings (youngest females, and only-child females. A one-way ANOVA was then computed to see if the means across those eight groups differed. The analysis revealed a significant overall, one-way effect, $F(7, 396) = 6.29, p = 0.000, \eta^2 = 0.12$.

Post-hoc comparisons using the Tukey HSD test indicated that mean financial literacy scores for the middle male group ($M = 1.93, SD = 1.10$) differed from middle females ($M = 1.16,$

$SD = 0.88$), youngest females ($M = 1.16, SD = 0.80$), and only-child females ($M = 1.00, SD = 0.96$). Middle males scored higher on financial literacy compared to middle, youngest, and only-child females. Mean financial literacy scores of youngest males ($M = 2.09, SD = 0.87$) also differed from oldest females ($M = 1.37, SD = 0.89$), middle females, and youngest females, and only-child females (see means above). Youngest males also scored higher on financial literacy compared to middle, youngest, and only-child females.

Between-Generation Analyses

Relationships between Dependent Variables. The relationship between generation (Millennials and Gen-Zeds) and financial literacy scores was investigated using the Pearson product-moment correlation coefficient. Preliminary analyses were performed to ensure no violation of normality, linearity, and homoscedasticity. There was a small, positive correlation between the two variables, $r = 0.13, n = 460, p = 0.005$, with Millennials associated with higher scores in financial literacy.

In response to this finding, an independent-samples t-test was conducted to compare the financial literacy scores between Millennials and Gen-Zed participants. There was a significant difference between mean financial literacy scores for Millennials ($M = 1.76, SD = 0.95$) and Gen-Zeds ($M = 1.37, SD = 0.94; t(460) = -2.83, p = 0.005$), whereas Millennials scored higher than Gen-Zeds. The magnitude of the differences in the means was small ($\eta^2 = 0.02$). No major generational differences were found in FKF, financial value, or financial anxiety scores.

Gender Differences. To analyze differences within each gender based on generation, the researcher ran tests, splitting the data by gender on SPSS. For only female participants, an independent-samples t-test was conducted to compare financial literacy scores by generation.

There was a significant difference in mean scores for Millennial females ($M = 1.66$, $SD = 0.87$) and Gen-Zed females ($M = 1.21$, $SD = 0.86$; $t(346) = -2.80$, $p = 0.005$). Millennial females tended to score higher than Gen-Zed females. The magnitude of the differences in the means was small ($\eta^2 = 0.02$). No other differences were found in the scores on dependent measures between generations.

DISCUSSION

While this study was originally aimed at diving into generational differences between Gen-Zeds, Millennials, Gen-Xers, Baby Boomers, and the Silent Generation, data collection provided only enough members of Generation Z and Millennials to compare. The above results examined relationships between participants' socio-demographics, financial literacy, and three dependent measures extracted from a factor analysis of the 18 questions created by the principle investigator: 1) financial knowledge from family (FKF), 2) financial value, and 3) financial anxiety scores. The results within Study 1 provide evidence toward approaching the 4 research questions explained within the introduction.

Hypothesis 1: A Generational Gap in Financial Literacy

In line with the first hypothesis, there was a generational gap found in financial literacy scores. Specifically, the older generation (Millennials) scored higher than the younger (Gen-Zeds). This finding supports Lusardi and Mitchell's (2011) finding that financial knowledge follows a U-shaped pattern with a similar effect between the two youngest adult generations of today. Though, it should be noted that there was no significant difference between financial literacy scores between Millennial males and Generation Z males, whereas there was a significant difference between Generation Z females and both Millennial males and females.

Since Generation Z females scored significantly lower than their male counterparts (who scored higher than Millennial females, perhaps the significance between the generations was due to the overwhelming number of females in the Gen-Z sample ($n = 314$).

Chen and Volpe (2002) found that college-going females have less overall knowledge in personal finance compared to college-going males. Perhaps related, Zissimopoulous, Karney, and Rauer found that college-aged women scored 15% lower than college-aged men when answering questions on basic compound interest (as cited by Barboza, Smith, & Pesek, 2016). The average financial literacy score of Generation Z females (40.33%) in the current study was about 21% lower than average Gen-Z male scores (61%). Lusardi and Mitchell's (2011) Financial Literacy Scale included questions on basic compound interest, inflation, and investment knowledge (see Appendix C). Provided these findings and the non-significant difference between Millennial males and females within the current study, perhaps financial knowledge tapers off for males after college while females undergo a rapid catch-up. This rapid increase in financial knowledge may be catalyzed developmentally. Emerging adult females may be forced into learning these basic financial concepts while striving for more independent living after graduating from college. Males may therefore have an easier transition into independent financial living, provided their level of financial knowledge being higher before they graduate.

Hypothesis 2: Patterns of Financial Development

We also expected participants to report similar developmental patterns of gaining financial knowledge (hypothesis 2). FKF, or financial knowledge from family scores, acted as a measure of financial development. Higher scores were associated with participants who believed their financial knowledge came from either observing their family or efforts taken by their family

to teach them about finance. There were no significant differences in FKF scores between Millennials and Gen-Zeds. The lack of significance provides evidence that both Millennials and Gen-Zeds attributed their families as responsible for a similar amount of their overall financial knowledge. The data provides evidence that supports the second hypothesis.

Hypothesis 3: Individual Differences

Individual differences in survey scores were expected based on socio-demographics including participants' education level and the highest education achieved by their parents (hypothesis 3). For members of Gen-Z, there was a small, positive relationship between father's highest education and financial literacy scores, $r = 0.13$. The small effect size may be in part due to gender differences and the high number of Gen-Z female subjects. There was no relationship between Gen-Z males' scores on financial literacy, FKF, financial value or anxiety with parental education level. Though, Gen-Z females scored higher on financial literacy if either their mother or father had more education. This group of females also scored higher in FKF scores if their mother and father achieved a higher level of education. Parents with higher education levels may have focused more on teaching their daughters about finance than those with lower education levels.

For Gen-Z males, there was a moderately strong relationship between financial literacy and financial value scores. Those who valued financial knowledge more tended to score higher in financial literacy. At the same time, there was an even stronger, positive relationship between financial value and FKF scores. For Gen-Z males, a greater effort taken by their family to teach them about finance may have led to individuals valuing financial knowledge more. In turn, these same individuals may have put more of an effort in improving their financial literacy on their

own. There was a small, positive relationship between financial value and financial literacy scores for Gen-Z females.

There was a major difference in the relationship between financial anxiety and financial literacy scores between the generations when split by gender. For Millennial females, there was a moderate, negative relationship between the two ($r = -0.46$, $n = 32$, $p = 0.008$), therefore, the more financially anxious participants in this group tended to do worse on the financial literacy scale. Yet, both Millennial and Gen-Z females rated similarly in financial anxiety scores, both being significantly higher than the both male groups. The Millennial female group also scored no differently than both male groups. Financial anxiety and financial literacy scores were not related in any way for Gen-Z females, who actually scored significantly lower than all three groups (Millennial males, females, and Gen-Z males). What might explain this extreme difference between both female groups?

The financial anxiety factor within the survey is by no means a measure with the ability to diagnose financial anxiety as might be by a clinical psychologist, though it provides insight into nervous thoughts about finance. Many young Americans experience negative consequences of an anxious perspective on finance. According to Shapiro and Burchell, financial anxiety leads to repercussions such as “a decreased sense of ability to manage one’s money, lower self-esteem, decreased sense of financial well-being, lower productivity, and higher levels of overall stress” (as cited by Doehring, 2018). The most common symptom of financial anxiety is involuntary avoidant coping such as not reading bank statements and avoiding financial topics in conversation (Shapiro & Burchell, 2012). Those higher in financial anxiety may then also avoid improving their financial literacy. Doehring (2018) makes a case for heightened financial anxiety being caused by incurring high financial debt for college-going individuals.

The relationship between financial anxiety and financial literacy may then strengthen after graduation. Millennial females experienced the difficulties of independent living and having the weight of college loan payments on their shoulders. Lessons in financial literacy are forced upon individuals transitioning into more independent living. One must take care of their loan, rent, car payments, etc. Those higher in financial anxiety may be left behind; they are more likely to avoid healthy financial behaviors that provide financial lessons. This potential case is further supported by the higher mean financial literacy score for Millennial females. Those lower in financial anxiety would learn the lessons tied to diving into more independent living, bringing up the overall average, whereas those higher in financial anxiety may have avoided financial these financial experiences.

For the most part, the younger, Gen-Zed females have not experienced the same level of independent living and related financial experiences compared to their Millennial female counterparts. Within the current study, Gen-Z females scored significantly lower than their Millennial counterparts. The disparity in financial literacy between individuals scoring low-to-average in financial anxiety may develop over time after college graduation and more advanced independent living experience.

There was also a major gender difference between the generations. An independent-samples t-test computed a difference between Millennial males and females in FKF scores that was approaching significance ($p = 0.06$). After running the same test between Generation Z males and females, no effect remotely close to being significant was found. Further research into this specific difference with a higher number of Millennial subjects would prove beneficial. There seems to be inferences made from this potential difference. One, there may have been a cultural shift in how much finance parents taught their daughters between the Millennial and Z

generations. The lack of difference between Gen-Zed male ($M = 14.09$, $SD = 4.09$) and females' ($M = 13.58$, $SD = 3.56$) mean FKF scores provide evidence of a more equal perception of participants' families efforts to teach each group about finance. Additionally, average FKF scores for Gen-Z females were higher on average than those of Millennial females ($M = 12.82$, $SD = 3.76$), but not significantly so. Two, the perception of how much effort a family placed into individuals' financial education may change over time based on a number of factors. Millennial females may feel as though their parents and family placed a lack of effort into teaching them about finance after getting out into the world and realizing they were less prepared than they thought. Gen-Z female adults are still in college and may feel as though their parents prepared them better for their current financial lifestyle.

Apparent Effects of Birth Order

Within their financial socialization theory, Gudmunson and Danes (2011) states that financial development is most influenced by two major processes carried out primarily by parents: implicit and explicit education. The article emphasizes that modeling (implicit) and discussion-based (explicit) education is carried out mostly by parents. Though, the authors failed to discuss the effects older siblings might have on one's financial development. For that reason, the current study dove into birth order, defined here as either being the oldest, middle, youngest, or only child. We found that participants who identified as the youngest child scored significantly higher in FKF scores than the oldest child group. Remember, FKF scores assess how much financial knowledge participants believe that came directly from their family while growing up. The youngest children believed that more of this knowledge came from their family than did the oldest group. The youngest children may have been helped more by their older

siblings, who were perhaps better able to teach them about financial concepts, being closer in development and being able to share how they learned about finance.

One thing to note is that there may have been adverse effects of sibling-based education depending on gender and birth order. After running the two-way ANOVA looking into the impact of gender and birth order on financial literacy on all Gen-Z subjects, an interaction was found. Outside of the only child groups, the youngest males scored the highest. Both youngest and middle male groups scored significantly higher than all female groups. Oldest males scored the lowest out of all male groups. For males, it seems as though it is most beneficial, in terms of financial learning, to be the youngest. Family members may place more emphasis on teaching males about finance than females or males may become more interested in finance at younger ages. Youngest males may be taught more by older siblings, their parents, and other family members compared to other groups.

In comparison, within the female groups, the highest financial literacy average score was by the oldest groups. Females who were the oldest child performed better than all other female groups but still lower than the oldest males on average. Youngest and middle females scored about the same. Why may the oldest females score the highest while, for males, the youngest were the most financially literate? This seems to be an unexplored concept within the research literature and should be further researched.

The impact of being an only child was very different for males versus females. Only-child males scored the highest out of all male groups, whereas only-child females scored the lowest out of all female groups. Perhaps only males are taught more by their parents in order to be less dependent in the future while female only children might be more coddled and taken care of in comparison.

This difference is supported by differences in financial anxiety between these same groups. A two-way ANOVA was also computed, looking into the impact of gender and birth order on financial anxiety among all participants. Only-child females had lower financial anxiety scores than all other female groups. Parents may by coddling their only-child females may lead to higher security for these only children, leading to less financial anxiety. Culturally, only-child females may pay more attention to the role of their mother whereas only-child males may be more influenced by their father's behaviors. If most live in families that are more traditional, fathers may handle the finances more than mothers. Therefore, only-child males may become more focused on finance as part of their future role as children whereas only-child females may gravitate away from finance being associated with their identity.

Oldest, middle, and youngest female participants all scored almost identically in financial anxiety. For males, the oldest and youngest groups differed from all female groups, whereas the middle males only differed from the oldest male groups. Therefore, the oldest males scored the lowest in financial literacy out of the other male groups but scored the lowest in financial anxiety.

Social Class, Household Income, and Political Orientation

Some major differences were found in the scores on the dependent measures for social class and household income. Higher class participants tended to score higher in financial literacy, the FKF measure, and scored lower in financial anxiety. According to Klapper, Lusardi, Oudheuseden (2015) found that financial literacy is highest among men, the upper classes, the more educated, and those who use financial services. The results of the current study reflect similar findings. Male and female Gen-Zeds from families with higher household income tended to score higher in FKF scores as well.

Political orientation was related to financial anxiety and FKF scores. The more liberal Gen-Z participants tended to have higher financial anxiety compared to their more conservative counterparts. For males, there was a moderate, positive relationship between political orientation and financial anxiety ($r = 0.41$), whereas more liberal males scored higher on the financial anxiety factor. Liberal males might be less prudent with their money compared to moderate or more conservative males. This, among other factors, may lead to higher levels of anxiety for the more liberal males as found within this study. For females, there was a small relationship between political orientation and FKF scores, whereas more conservative females tended to score higher in the FKF measure. Conservative families may focus more on teaching their children about finance.

Hypothesis 4: Financial Anxiety

Gen-Zeds were expected to score higher on the financial anxiety measure compared to Millennials. Yet, the data failed to support this hypothesis; there was no significant difference in financial anxiety scores between the generations.

Limitations

It is important to note that the above hypotheses 1-3 were confirmed by the results tested within a specific context. Our participants were mostly undergraduate students attending a progressive, Liberal Arts University in upstate New York. Very close to half (39.9%) of the Generation Z sample consisted of undergraduate students who majored in Psychology. Ideally, future research should take more care to extract data from more Millennials. Within this dataset, 403 individuals were Generation Z while only 52 were Millennials. Special care was taken to

analyze differences between the two cohorts to satisfy statistical assumptions, though the Millennial findings would be stronger with a larger sample size.

Our study did not focus on developing the factors extracted from the survey. Therefore, there is doubt that the dependent measures including FKF, financial value, and financial anxiety scores actually measure the constructs their titles allude to. For example, the three questions making up the financial anxiety factor are in no way a verified measure of what may constitute Financial Anxiety as a pathological diagnosis in the DSM-6. Though, each question does seem tied to feelings of anxiety around finances. The questions ask whether participants feel anxious when thinking about their finances or the stock market and whether participants think of the 2008 Financial Crisis when they think about the stock market. Using verified academic measures of financial anxiety may prove beneficial for future research. The other two factors may benefit from development in the future. There are no measures relating to how much one attributes financial knowledge coming from their family or how much they value finance/financial knowledge in the research literature. The two factors (FKF and financial value) within this study form a base to possibly be built upon that may be used to inform Gudmunson and Danes' (2011) financial socialization theory.

Future Research

The results of the current study that provide much potential for future research relate to the effects of sibling birth order, gender differences, and the interaction of these demographics in financial perspectives, literacy, and anxiety. The findings on sibling birth order (along and together with gender) were not mentioned in Financial Socialization Theory but seem to possibly play a key role for at least the current emerging and young adult populations. Within the theory, explicit and implicit financial lessons provided by parents are assumed to be the primary source

of financial development for children. The data from the current study provides evidence that these same types of lessons from siblings may have a major influence on financial development or that birth order directly limits the exposure an individual has to their parents' lessons compared to their siblings. These potentialities are empirical by nature and should be further researched.

In terms of gender, it has been long known that female emerging adults score lower on average in comparison to their male counterparts in financial literacy (Chen & Volpe, 2002). Within this study, we found females scored lower than males on average in financial anxiety too. With the growing female influence within STEM fields such as mathematics and science, young female students today still may be at risk of falling (or staying) behind in more business-related fields such as finance, economics, and accounting. Future research may provide greater insight into potential causes toward higher financial anxiety and lower financial literacy scores in females compared to males. These differences may then be targeted, and, with time, these gaps can be closed, providing females around the world with more financially-related comfort and opportunities.

Study 2: Qualitative Interviewing

METHODS

Participants. 15 subjects who were at least 18 years of age took part in the interviews. Of the 15, 8 subjects were females, 6 male, and 1 non-binary (mean age: 20.73 years). These subjects were recruited through the SUNY New Paltz SONA System.

Interview. The interview consisted of 31 questions created by the principal investigator organized into 5 sections: socio-demographics (10 questions), financial knowledge and its source

(8 questions), value (6 questions), affect (5 questions), and miscellaneous (2 questions). Non-demographic questions were also divided based on past (6 questions), present (7 questions), and future (8 questions) perspectives. The qualitative interview in its entirety can be found in Appendix B.

Emergent themes were coded by the principal researcher. The themes were recorded in a hand-written codebook. Per each question, codes were examined multiple times and overarching themes (or axial codes) to each individual question were identified by the principal investigator. Specifically, emergent themes were grouped based on content and color-coded. Each color identified a different axial code. Once all axial codes were defined, patterns within and across interviews were identified.

To examine inter-rater reliability, a second researcher trained in qualitative methodology was provided 30% of the interview data and a codebook including all defined axial codes. Then, the second researcher went line-by-line throughout the data, coding each interviewee's answers based on the axial codebook. The principal investigator and researcher then met and compared how each coded the data using the axial codebook. The principal investigator divided the number of correctly coded themes over total axial codes within the provided data. The researcher correctly placed 148 out of the total 152 axial codes (97.37% accuracy) defined by the principal investigator.

Results

Analytic Procedure. It should be noted that the principal researcher chose to code each non-demographic question prior to coding demographics. This approach was taken to avoid bias during the coding process for all target questions. Therefore, the principal researcher coded each

question without knowing either the identities or demographics of the participants. Therefore, coding was data-focused, protected from any possible biased perceptions the principal researcher may have developed about subjects after interviewing. Patterns among axial codes were developed. Then, the principal researcher coded answers to the questions on demographics (Table 4). Potential connections between demographic and target question themes were examined and coded for.

Connections in themes were analyzed within target questions, between target questions, and between target question and demographic question themes. The following sections within the results will follow this pattern: participant socio-demographics, patterns within each target question, patterns between target questions, and themes between demographic and target questions.

Participant Socio-Demographics. Demographic questions were mostly focused around gender, race/ethnicity, and socio-economic status, or SES. Participant answers to socio-demographic questions can be found below (in table 4). Participants were mostly undergraduate college students who major in psychology.

Table 4*Demographic/Background Questions*

Participant (N = 15)	Gender	Age	Year in School	Race/Ethnicity	Rural, Suburban, or Urban Upbringing	Hometown Neighborhood Class	Family's SES Growing up	SES Currently Identified With	
Kelly	Female	20	Junior	African American	Urban	Middleclass	Middleclass	Lower middleclass	
Paul	Male	21	Senior	White	Rural	Upper middleclass	Upper middleclass	Upper middleclass	
Ivey	Female	20	Senior	White	Rural	Working class	Lower middleclass	Upper middleclass	
Justin	Male	23	Senior	Black and White	Suburban	Middleclass	Middleclass	Middleclass	
Sarah	Female	21	Senior	Hispanic	Suburban	Lower middleclass	Lower class	Lower middleclass	
Nick	Male	21	Senior	White	Suburban	Working class	Lower middleclass	Lower middleclass	
Lee	Male	18	Freshman	White	Suburban	Middle or Upper class	Middleclass	Middleclass	
Mary	Female	23	Senior	Black	Urban	Lower middleclass	Lower class	Lower middleclass	
Mack	Non-Binary	22	Senior	White and Middle Eastern	Suburban	Upper middleclass	Upper middleclass	Upper middleclass	
Alec	Male	22	Senior	White	Suburban	Lower middleclass	Lower middleclass	Lower middleclass	
Anne	Female	21	Senior	Dominican	Urban	Middleclass	Middleclass	Lower middleclass	
Dave	Male	18	Freshman	African American	Urban	Working class	Lower middleclass	Lower middleclass	
Kara	Female	20	Junior	Hispanic	Rural	Working class	Lower middleclass	Upper middleclass	
Julie	Female	22	Senior	White	Suburban	Middleclass	Lower middleclass	Middleclass	
Nina	Female	19	Junior	Asian	Urban	Middleclass	Middleclass	Upper middleclass	
<i>Summary</i>		<i>M = 20.7</i>							

Inductive Thematic Analysis

Patterns Within Questions.

Table 5*Financial Lessons while Growing Up*

1. When you were growing up, how did your family talk about finances?			
<i>Theme</i>	<i>N</i>	<i>%</i>	<i>Example</i>
Money was not discussed	10	67	I grew up with my mother. She wouldn't speak about money much. (Ivey)
Lessons about finance	4	27	Just keep it private and be responsible with your own money. (Paul)
Financial stress	3	20	My parents got divorced when I was really young, and they would usually just argue... about my dad not paying child support and stuff. (Nick)
2. What lessons did you learn from your family about money?			
<i>Theme</i>	<i>N</i>	<i>%</i>	<i>Example</i>

Save money	10	67	Yeah, they definitely told me to save money and it's not like we have an abundance of money that you can use it whenever, extravagantly. (Nina)
Spend on needs, not wants	7	47	Spend on the things you need first before the things that you want. (Lee)
Money is scarce	3	20	Um, that it doesn't come easy, that I knew. I saw how hard my parents worked for what they had. (Kara)
3. What lessons did you learn from society about money?			
<i>Theme</i>	<i>N</i>	<i>%</i>	<i>Example</i>
Money is everything	11	73	... if you have (money) it's kind of like the golden ticket. It gives you access to almost anything. (Mary)
Spend on needs	5	33	Only spend money on things you need, not what you want. (Ivey)
Save	4	27	Again, save money. Money isn't infinite. (Dave)

When asked how their family talked about finances while they were growing up, most interviewees said money was not discussed or even avoided:

“I grew up with my mother. She wouldn't speak about money much.” (Ivey)

“They didn't really talk in front of me about it.” (Kelly)

“They wouldn't really talk about it. When I would ask, they'd say don't worry about it.”
(Lee)

Subjects then described the lessons they learned from their families about finance during their childhood. The primary answer said by most, perhaps unsurprisingly, was to save money:

“Yeah, they definitely told me to save money and it’s not like we have an abundance of money that you can use it whenever, extravagantly.” (Nina)

“To save and spend wisely and invest in my future.” (Nick)

The second most common answer had to do with spending. Interviewees specifically said they were told to spend on needs:

“Spend on the things you need first before the things that you want. (Lee)

“... save it and use it when you need it.” (Nina)

Moving on from financial knowledge absorbed from their families, participants were asked lessons they learned from society about money. The vast majority in some way alluded to money being everything or of the highest importance:

“... if you have (money) it’s kind of like the golden ticket. It gives you access to almost anything.” (Mary)

“... (money) leads to everything else. So, just money first and everything else underneath.”

(Lee)

“(Money) is super important and that it kind of makes the world go round... you need it for everything.” (Kara)

Overall, it appears that finance was a taboo topic within most families of participants. Three overall lessons about money were taught by older family members and the society surrounding participants: money is of the highest importance, so it should be saved as much as possible, and you should spend money on your needs and not what you want.

Table 6*Current Financial Perspectives*

4. Are you happy with how things are financially?			
<i>Theme</i>	<i>N</i>	<i>%</i>	<i>Example</i>
Financially happy	11	73	Uh, yes because I wouldn't expect them to be any better right now, especially since I'm working toward a degree. (Kelly)
Things could be better	6	40	Things could be better but I'm not like mad. (Sarah)
Financially unhappy	2	13	No. I spend so much on food now it's crazy. (Ivey)
5. Would you say you are too focused on finance or how's that balance?			
<i>Theme</i>	<i>N</i>	<i>%</i>	<i>Example</i>
Too focused financially	7	47	Yeah, my parents always told me to not worry so much but it always comes to mind like how much things cost... (Lee)
Finance consumes thoughts daily	6	40	I think it consumes me because it gives me a lot of anxiety to think of how much money I don't have. (Alex)
Not too financially focused	5	33	Um, not really (too focused). (Kelly)
Not financially focused enough	2	13	Personally, I'm not as focused as I'd want to be... (Sarah)
6. Some people say that they are "good with money." Is this how you would describe yourself? Why or why not?			
<i>Theme</i>	<i>N</i>	<i>%</i>	<i>Example</i>
Saving and spending wisely	12	80	Yeah, I just don't spend money I don't have and I just see what that does to people... (Justin)
Good with money	9	60	Yeah, I've definitely gotten better than I used to be. (Paul)
Not good with money	4	27	I would not (say I'm good with money) because I don't have a long enough track record of being good with money. (Mary)

When asked whether they were happy with their financial situation, the vast majority (73%) admitted they were financially happy, 40% said things could be better financially, and only two subjects (13%) stated they were financially unhappy. These figures seem misleading for a diverse, mainly middleclass group of college undergraduates. The researcher suspects that answering questions on financial perspectives might be somewhat intimidating and/or taboo for undergraduate students. Therefore, these answers may be more positive than how participants feel privately.

When asked if they are too focused on finance, most participants (47%) said they were too focused on finances, whereas only 13% said they are not financially focused enough. Almost half of participants (40%) said they feel their thoughts are consumed with their finances daily:

“I think it consumes me because it gives me a lot of anxiety to think of how much money I don’t have.” (Alex)

“... it’s very instilled in me from everyone around me that I need to be very focused... like a daily reminder.” (Sarah)

Nine out of fifteen (60%) of interviewees said they were good with money compared to 27% who admitted they weren’t. Interestingly, 80% of all participants mentioned that they were attempting to save and spend wisely, even if they didn’t think they were “good with money.”

Table 7
Current Financial Perspectives Continued...

7. Is having a lot of money important to you? Why or why not?			
<i>Theme</i>	<i>N</i>	<i>%</i>	<i>Example</i>
Yes	8	53	Yes, just because of having a ton of money for a rainy day... (Paul)

Comfort is king	7	47	I think that having enough to have a self-fulfilling life and being comfortable is important to me. (Julie)
No	5	33	... it's so automatic to think yes but thinking realistically, no. (Ivey)
Use to support family	4	27	... I know my parents would want to give us more so if I can give them more by going to school, getting a job, and stuff like that, I definitely would. (Anne)
8. Do you talk about finance with your family nowadays? What about?			
<i>Theme</i>	<i>N</i>	<i>%</i>	<i>Example</i>
Current payments	10	67	I dorm here so my living situation, financial aid, things like that. (Kelly)
Future financial planning	8	53	I've been talking with my dad like what do I want to do after graduation... we definitely talk about future finances quite a bit. (Paul)
Save	5	33	You shouldn't really spend money if you don't have it. (Justin)

When asked whether having a lot of money was important to them, only a third of all subjects said no. Most (53%) subjects said yes for differing reasons, ranging from having a safety net to living a more luxurious lifestyle:

“Yes, just because of having a ton of money for a rainy day...” (Paul)

“Yeah, when I grew up, I was comfortable, my parents gave me everything I needed but I kind of want more accessories, I guess.” (Lee)

Almost half (47%) of interviewees stated something along the lines of “comfort is king.” Financial comfort or comfortable living in general was their financial goal. Some of these participants said a lot of money would be nice, but most said they wanted enough money to be comfortable, not necessarily a lot of it:

“Yeah (having a lot of money) is kind of important and would be nice but, like I said, I’d rather be comfortable than having too much money.” (Alec)

“I think that having enough to have a self-fulfilling life and being comfortable is important to me.” (Julie)

Remember, 67% of participants stated that finance was not discussed by their families while they were growing up. When asked if they talk about finance with their families today, as young adults, 67% stated that they talk about current financial payments:

“I dorm here so my living situation, financial aid, things like that.” (Kelly)

Most conversation topics revolve around college, car, and living expenses.

Just over half (53%) of interviewees said they talk about their future financial situations with their families today:

“I’ve been talking with my dad like what do I want to do after graduation... we definitely talk about future finances quite a bit.” (Paul)

“Right now, my mom is really pressuring savings and future planning and things like that. And, like I said earlier, about me working on my credit and how having good credit opens a lot of doors.” (Mary)

Common payments (college, car, housing) faced by emerging adults and their families seem to act as catalysts for most participants, starting the financial conversations that were taboo until this point in their lives. How might this affect financial effects of birth order? Might this catalyst for the eldest sibling provide an enhanced financial perspective to younger siblings who observe or maybe part-take in these conversations before they reach emerging adulthood?

Table 8
Future Financial Goals

9. What are your financial goals to achieve by 50 years old?			
<i>Theme</i>	<i>N</i>	<i>%</i>	<i>Example</i>
Financial comfort	13	87	I want a secure living space where no one has to help me with my bills. (Sarah)
Enough savings/retirement	5	33	... just being able to save as much as I can (Mack).
Paid off debt	4	27	Just having everything paid off, a paid off house, cars paid off, no debt, that's the big thing... (Justin)
Own house	3	20	Um, I definitely want to have my own home... (Nick)
10. What do you think is necessary for you to reach your financial goal?			
<i>Theme</i>	<i>N</i>	<i>%</i>	<i>Example</i>
Continuing education	9	60	I think going back to school after I graduate, getting my master's because I want to be a guidance counselor. (Alec)
Stable job/work	8	53	Um, a good and stable job. (Kelly)
Sound financial decision-making	5	33	Impulse control with money would be the big one... (Paul)
Saving	4	27	Just saving wisely and not spending more than I should. (Nick)
Investing	2	13	Putting (saved money) into a savings or buying investments. (Mack)

In terms of future financial perspectives, subjects were asked about their future financial goals they wanted to achieve before reaching 50 years old. The vast majority (87%) said that financial comfort was the goal:

“I want a secure living space where no one has to help me with my bills.” (Sarah)

“... I want to be financially stable... be able to support my mom and my parents, and support the family I have.” (Kelly)

“I’d like to have enough money to live comfortably... for example, I’d like to travel and not have it be such a financial burden and buy stuff I like.” (Kara)

Table 9
Perspectives on Investment and the Stock Market

11. How do the words “stock market” make you feel?			
<i>Theme</i>	<i>N</i>	<i>%</i>	<i>Example</i>
Uneasy/nervous/intimidated	7	47	Nervous, confused... a whole lot of anxiety. (Mary)
I don’t know much	7	47	I don’t know too much about it. (Lee)
Gamble/risky	4	27	Uneasy in a sense of gambling scares me. (Ivey)
Curious	4	27	Intrigued because I haven’t done a lot of research on it. (Alec)
Neutral	3	20	I’d say fairly neutral... I don’t have any very strong opinions about the stock market. (Paul)
12. How do you see investment fitting into your own life?			
<i>Theme</i>	<i>N</i>	<i>%</i>	<i>Example</i>
Thinking about it	11	73	We are thinking about investing. (Ivey)
After education/learning	6	40	I guess I can see it becoming a bigger part of myself as I educate myself more about it... (Nick)
Low-risk investments	3	20	... I would go for the most sure thing. (Justin)
13. What would need to happen for you to start investing in the stock market?			
<i>Theme</i>	<i>N</i>	<i>%</i>	<i>Example</i>
Talk to experienced family/friends	10	67	... learn from friends or family that have done it in the past... (Lee)
My own research	9	60	And, also, the searching on your own. Just look up things. (Nina)

Formal education	6	40	I guess I should take like an economics class. (Dave)
Hire professional	5	33	I'd probably want to meet with an advisor and then learn to do it myself... (Nick)
Against hiring professional	3	20	... professionals are really good at persuading you and persuasion is the key to everyone's downfall. (Julie)

Many subjects (47%) feel nervous, uneasy, or intimidated just hearing the words stock market:

“Nervous, confused... a whole lot of anxiety.” (Mary)

“Intimidated. It seems like such a big, looming thing.” (Kara)

“Nervous. Just something I wouldn't really look to include myself in, the stock market.”
(Justin)

At the same time, 47% said something along the lines of “I don't know much” about the stock market. After hearing the words “stock market”, participants said they felt nervous and stated that they didn't know much about the topic.

It is important to note that within the order of the actual interview (see Appendix B), the question about the words “stock market” and the following questions in the above chart included the two future financial goal questions, the question on whether having a lot of money is important to them, and a question asking what a lot of money looked like in their eyes. After this order of questions and 7 subjects saying the stock market makes them feel nervous, 11 (73%) of subjects stated they were thinking about investing some day:

“We are thinking about investing.” (Ivey when talking about her and her family)

“Like down the line, in the stock market, maybe I would try to. I guess if I learned about it, I would invest in it. But right now, I don’t really know too much. (Dave)

“If I’m interested in it, then my next step would be obtaining more knowledge on it... I think taking a class at a Uni.” (Julie)

Some participants made a complete 360 in their tone about the stock market after being questioned about their financial goals and how important they find it for them to have a lot of money. After Kara said the stock market makes her feel intimidated, she saw investment happening sometime in her future, stating:

“I think I would have to get educated more on it, but I’m not opposed to it for sure. And I think that it’s a smart move for those who know what they’re doing, and I would like to become someone who knows what they are doing.” (Kara)

For 40% of participants, education was the missing link for them to start investing:

“I guess I can see it becoming a bigger part of myself as I educate myself more about it...” (Nick)

“I guess I should take like an economics class.” (Dave)

Moving to question 13, which asked specifically what it would take for subjects to start investing, 67% said they would talk to family and friends who have experience with investing:

“... learn from friends or family that have done it in the past...” (Lee)

“I would probably reach out to my brother because I think he knows. He does invest in the stock market so, if I was going to talk to anyone about it, it would probably be my brother.” (Kara)

Many (60%) stated it would take more of their own research before making the move to invest. Interestingly, only 33% were at all interested in hiring a professional while three interviewees came right out and said they would not hire a professional.

Table 10
Closing Questions

14. The past ten years have been very good for the market. What do you predict about the future of the stock market?			
<i>Theme</i>	<i>N</i>	<i>%</i>	<i>Example</i>
Go up	8	53	If the past was more steady, I think it might just go up. (Nina)
Go down	7	47	... it's going to be a little bit of a downturn, from what I've read. (Mack)
It fluctuates	7	47	I know there are a lot of ebbs and flows in it. (Kara)
15. After talking about these topics, how are you feeling emotionally?			
<i>Theme</i>	<i>N</i>	<i>%</i>	<i>Example</i>
Thoughtful	6	40	Thoughtful about... how much could you better your situation by learning about the stock market and putting money into in, you know? (Justin)
Interested/intrigued	5	33	I guess intrigued. I want to go educate myself and learn about it more. (Nick)
Anxiety	5	33	A little stressed out. (Kelly)
Must financially get it together	2	13	Like finance, I need to get it together. (Ivey)
Confident	2	13	Yes. I feel pretty confident about finance.

At the very end of the interview, the principal researcher asked, “So, after talking about these topics, how are you feeling emotionally?” Most answers were positive as seen in the table

above. For 6 participants, they described feeling thoughtful about things ranging from bettering their financial situations to planning out their future in their mind:

“Thoughtful about... how much could you better your situation by learning about the stock market and putting money into in, you know?” (Justin)

“It opened up ideas and thoughts I never had.” (Anne)

A third of participants said they were intrigued or interested in investing, while another third said they felt anxious after discussing finances.

Patterns Between Target Questions.

The following tables focus on a focal theme of answers to one interview question that seemed to relate to themes in other target questions. Each table is titled with a target question. The “themes connect to...” provides the theme in focus. The theme in Table 11 is “money was not discussed” which was answered by 10 interviewees when asked how their families talked about financed when they were growing up. The themes below the target theme are from other questions (listed above each theme).

Table 11

1. When you were growing up, how did your family talk about finances?

Themes connected to <i>Money was not discussed (N = 10)</i>	# of individuals who chose both	% of participants who said both (out of 15)
Question 3: Money is everything	8	53
Question 4: Financially happy	7	47
Question 5: Finance consumes thoughts daily	6	40
Question 8: Current payments (discussed with family)	6	40

nowadays)		
Question 10: Continuing education (necessary to fulfill financial goals)	7	47
Question 13: My own research (would be necessary for me to start investing)	6	40

As previously stated, when asked how their family talked about finances when they were growing up, 10 out of 15 participants said that finances were not discussed. Of these ten participants, 8 also said society taught them that “money was everything.” Most of these individuals also said they were financially happy, continuing education was necessary to fulfill their financial goals, finance consumes their daily thinking, and they talk about their current financial payments with their family nowadays. Before starting to invest in the stock market, 6 of these 10 individuals stated they would have to complete their own individual research.

Table 12

7. Is having a lot of money important to you?

Themes connected to <i>Yes</i> (<i>N</i> = 8)	# of individuals who chose both	% of participants who said both (out of 15)
Question 11: Uneasy/nervous/intimidated (how the words “stock market” make you feel)	7	47
Themes connected to <i>No</i> (<i>N</i> = 6)	#	% who said both (of 15)
Question 2: Spend on needs, not wants (learned from family)	5	33
Question 9: Financial comfort (financial goal)	6	40
Themes connected to <i>Comfort is king</i>	#	% who said both (of 15)

<i>(N = 7)</i>		
Question 9: Financial comfort (financial goal)	7	47

Out of the 15 total interviewees, 8 said that having a lot of money was important to them. Of these individuals, 7 out of 8 also said the stock market makes them feel nervous, uneasy, or intimidated. Of those who said having a lot of money wasn't important to them (6 total), 5 said they learned the lesson of spending on their needs from their family, whereas all 6 said their ultimate financial goal was financial comfort reaching 50 years of age. All individuals who said enough money for comfortable living is all they want also said their financial goal was financial comfort.

Table 13

12. How do you see investment fitting into your own life?

Themes connected to <i>Thinking about it (N = 11)</i>	# of individuals who chose both	% of participants who said both (out of 15)
Within question 3: Money is everything (lesson from society)	8	53
Question 4: Financially happy	7	47
Question 7: Yes (having a lot of money is important)	7	47
Question 9: Financial comfort (future financial goal)	10	67
Question 14: Go down (predict future of stock market)	6	40

Many (11) subjects stated they were thinking about fitting investment into their lives. Most of these individuals also said society taught them “money is everything,” they are financially happy, having a lot of money is important to them, their ultimate financial goal is financial comfort. More than half also believe the stock market is bound to go down after being told it has been rising for ten years.

Table 14
15. After talking about these topics, how are you feeling emotionally?

Themes connected to <i>Interested/intrigued</i> (<i>N = 5</i>)	# of individuals who chose both	% of participants who said both (out of 15)
Within question 2: Save (lesson from family)	5	33
Question 9: Financial comfort (future financial goal)	5	33
Question 12: Formal education (to start investing)	5	33
Question 12: Thinking about it (investing)	5	33

When asked how they were feeling emotionally at the end of the interview, a third of all participants said they felt interested or intrigued in investing specifically. All 5 individuals also said their family taught them to save growing up, financial comfort was their major goal, it would take formal education for them to start investing in the stock market, and that they were thinking about investing earlier in the interview.

Between Demographic and Target Questions.

Social Class

For this section, two groups were created according to their families SES when interviewees were growing up. The first, including 7 individuals, contains participants from the Lower and Lower middleclass. The second, including 8 subjects, contains those from the Upper middleclass and Middleclass. There were no subjects who claimed to be members of the Upper class.

When asked if they were happy with how things were financially, 4 out of 7 in the lower classes said things could be better, whereas only 2 out of 8 said the same from the higher-class group. A higher percentage (5 out of 7) of lower-class individuals said they learned money was everything from society compared to higher-class subjects. This same amount (5 out of 7) of lower-class interviewees also said the words “stock market” make them feel nervous.

Gender Differences

There were some major gender differences between answers to the interview questions. To start, when asked how their family talked about finances when they were growing up, 7 out of 8 females said money was not discussed compared to only 2 out of 6 males. When asked whether they were “good with money,” only 3 out of 8 females said they were good with money compared to 5 out of 6 males. These same individuals said having a lot of money was important to them (3 out of 8 females: 5 out of 6 males). Compared to 2 out of 6 males, 7 out of 8 females claimed that continuing education was necessary to reach their financial goals. Lastly, 5 out of 8 females said they were thinking about fitting investment into their lives compared to 5 out of 6 males. The vast majority of participants saw investment fitting into their lives in the future.

DISCUSSION

The main goal of Study 2 was to explore Generation Z perspectives on money, investment, and the stock market. Just over 50% of participants said that having or accumulating a lot of money was important to them while a third said having a lot of money was not important. Notably, all subjects who did not explicitly say having a lot of money was important to them said that financial comfort was the most important thing; not necessarily having a lot of money. How did each participant develop these fiscal views? When asked about financial lessons they absorbed from society, over two thirds of interviewees said they learned that “money is everything.” One subject described this adopted view of money as the “golden ticket” in life; you need it for virtually everything.

When asked how money was discussed by their family while growing up, two thirds of subjects said that money wasn’t talked about or was treated as taboo. At the same times, eight of these same participants said they learned money was everything from society. This is an interesting paradox that needs further explanation. Complicating matters further, 7 participants from this same subgroup reported that they are currently financially happy while also being consumed by financial thoughts every day. One possible explanation is that familial emphasis on financial privacy may lead to a higher respect or perceived importance of money, though this does not address the participants’ current satisfaction with their finances. Drawing from Bandura’s Social Learning Theory, perhaps these individuals have adopted their parent’s financial behaviors through observation (as cited in LeBaron et al., 2018). If so, many of these participants may have stated they were financially happy as a default answer. Are most undergraduate college students financially happy? Perhaps this default “yes, I’m financially happy” may be a way to deflect a question that would appear intrusive to one’s financial privacy. For example, when these subjects were little and asked their parents about finances, similar

statements such as “everything is okay” or “don’t worry about it” may have been common. Relating to Bandura’s theory, these answers may have just been modeled over years of a participant’s childhood.

A final point about the group whose family did discuss finances is gender related as 7 out of these 10 individuals were females (out of only 8 participants overall). Only 2 out of 6 males said their family did not discuss finance with them growing up. This finding has major implications. Finance is grounded in applied mathematics, a traditionally male-dominated field. Perhaps many parents discuss finance with their sons more than daughters because of this cultural norm. If so, this lack of financial discussion may be somewhat responsible for previous findings on females’ higher anxiety and lower financial literacy scores.

Perhaps related, only 3 out of 8 females said they were financially happy compared to 5 out of 6 males. Female financial development may be lacking either in the modeling or direct education females receive from parents or family as children compared to males. Culturally speaking, traditional parental roles such as fathers typically managing finances may impact females’ financial development. Alternatively, females may just be less interested in finance compared to males. Though, 5 out of 8 females said they were thinking about fitting investment into their lives compared to 5 out of 6 males. This finding provides evidence that females are interested in finance or at least specific aspects of finance. The extent to which this major difference is developmental is an area for further research.

When asked about their future financial goals and what they think it will take to achieve them, 7 out of 8 females said they believed continuing education was of major importance for achieving their long-term, financial goals. In comparison, only 2 out of 6 males included this in their answer. Most males (5/6) said that a stable job was important to achieving their financial

goals. Females' emphasis on continuing education may be related to women pursuing more advanced collegiate degrees than men today.

According to Arnett (2000), a central process of emerging adulthood involves individuals experiencing advanced levels of autonomy compared to adolescents. This autonomy brings a sense of independence ranging from simple financial decision-making to total financial independence. According to this study, when emerging adults move out of their parents' homes they often have financial conversations; for many these are the first, serious conversations participants had with their parents about finances or money. It is important to note, however, that these conversations may often be one-dimensional and not focused on long-term issues. Two thirds of our sample said that they talk about current financial payments with their families today, while just over half of (8/15) said that they talk about future financial planning. This suggests that many parent-emerging adult conversations may be focused on topics related to money needed for everyday life in college, paying tuition expenses, and living expenses while not addressing long terms goals, debt, and planning. For those 8 out of 15 above, conversations were more advanced, discussing the future financial plans for either the interviewee or their family. Healthy financial behaviors like saving and investing tend to be future-oriented. If many individuals are only having serious financial conversations with their families about present payments alone, would they have a harder time developing a more future-oriented perspective of finance or money compared to those who do talk about future finances with their families? This is an empirical question that would benefit from future research.

Participants were asked three questions that revolved around the stock market and investment. The first asked how the words "stock market" make them feel. Under half (7/15) said that the stock market made them feel uneasy, intimidated, or nervous. Of these 7

individuals, all said that having a lot of money was important to them. Might these individuals view the stock market as a threat to their finances since they place a higher emphasis on acquiring money compared to the other interviewees? This is possible, though it is important to note that the same 7 individuals said that they are thinking about investing at some point in their lives. Perhaps the potential to make money in the stock market overrides the uneasy feelings these subjects have about the stock market. Or, since these individuals are all undergraduates studying Psychology, these negative feelings may also be more related to having a lack of knowledge about the stock market or investing. Related to this, 7 interviewees said they don't know much about the stock market, including a couple individuals from the first group who feel uneasy. The individuals who valued money the most and felt nervous hearing the words "stock market" seemed more likely to see themselves investing in the future. This group should be investigated more in the future. Further research might discover how to better connect this group with the financial services that would best serve teaching them more about investing.

Limitations

As in Study 1 and any study, there are limitations to Study 2. One of the greatest limitations can be found in the demographics of our participants. All interviewees majored in psychology at a progressive Liberal Arts University in Upstate New York. Ideally, this study would have looked at a more diversified group of Gen-Z individuals from several different backgrounds. At the same time, the uniform academic background of subjects was also a strength, as the principal researcher was interested in exploring financial views in a group with a wide range of personal financial experience but a narrow amount of academic or professional experience in finance.

As with any qualitative research, the personal bias of the involved researchers must be considered. In the case of the current study, the principal researcher works in financial services and has an associate level of personal and professional experience in finance, specifically related to investment. These biases that may threaten the interpretation within the coding process were addressed in two ways. First, all demographics of participants were not coded until all interview questions were coded, as explained more thoroughly in the methods section. Second, the second researcher who coded for inter-rater reliability had limited personal experience and no prior professional experience in finance or investment.

Due to the taboo nature of talking about finances, as talked about within the above discussion, individuals' tendency toward financial privacy or discomfort while talking about finances may have influenced the answers to many interview questions. For example, questions asking subjects how happy they are with their finances, how financially focused they are, whether they are good with money, how often they talk about finance with their family today, and so on could somewhat violate one's level of comfort and influence their answer. There may also be effects related to social desirability. Subjects might have answered based on how they wanted to be perceived by either themselves or the interviewer. The interviewer, or principal researcher, was a male graduate student aged anywhere from 1 to 5 years older than interviewees. Undergraduates being asked many financial questions by a graduate student who is slightly older and is assumed to have higher financial knowledge may be influenced by social desirability or other social influence when responding to questions relating to financial perspectives.

Future Research

As previously mentioned, the interview was concluded with a question asking participants how they felt emotionally after the conversation. Just over a third said the interview made them feel thoughtful about a few things including finance and their future. A third of individuals felt interested and/or intrigued in investing. Another third felt anxious. After finding these patterns, it seems as though a longitudinal study would be beneficial in measuring the effects of having such a conversation over the following weeks, months, and years. The interviews were all question and answer. The emotions participants felt after the interview including, interested/intrigued, thoughtful, and anxious all stemmed from either the questions asked, their answers to those questions, and associated thoughts during the interview. Involving academically verified measures such as a financial literacy, anxiety, and perhaps a financial behavior assessment in which individuals just rate their financial behaviors the prior month would be beneficial for future use. This data could be collected before the interview and then a second interview with the same subjects would occur months later when they would once again fill out the assessments. Having such an advanced financial conversation may positively or negatively affect future financial behaviors.

Placing a greater emphasis on socio-demographics would be beneficial in future research. Within this study, gender and SES differences were the primary focus, yet so many other demographics should be focused upon in future research. Specifically related to Study 1, future qualitative or mixed methods research should include questions regarding birth order and sibling influence on financial development.

GENERAL DISCUSSION

The original goal of the current paper was analyzing differences between all current adult generations in financial perspectives while diving deeper in specific findings on Generation Z.

Problems during the data collection phase in Study 1, such as barriers in collecting data from a large number of older adults digitally, led to the collection of data on Millennials and Gen-Zeds alone. Instead of comparing all adult cohorts, Study 1 focused upon the current emerging adult population (Gen-Zeds aged 18-23) and the most recent emerging adult population (Millennials aged 24-39). This consolidation in the focus of our research provided strong and novel results.

Millennials and Gen-Zeds

In line with hypothesis 1, we found a distinct generational gap in financial literacy. Millennial's average scores on Lusardi and Mitchell's (2011) Financial Literacy Scale were higher than those of Gen-Z subjects. Previous literature has described financial literacy by age as a "U-shaped" curve with middle-aged individuals scoring the highest and the youngest and oldest adults scoring the lowest (Lusardi & Mitchell, 2011). Provided that the oldest Gen-Zeds just entered emerging adulthood while the oldest Millennials are middle-aged, the gap in financial literacy was expected. Though, it must be noted that there were no significant differences in financial literacy scores between Millennial males, females, and Gen-Z males. Gen-Z females, the largest sample between the four, scored significantly lower than all three groups. The high number of females ($n = 314$) may have heavily influenced the average of Gen-Z as a whole. A higher number of Gen-Z males ($n = 93$) may have lifted that average. Future research would benefit from evening out sample sizes between these populations.

The FKF factor as the dominant measure quantifying how much learned financial knowledge subjects attributed to coming from their family. The data showed almost no differences in FKF scores between samples based on generation or gender. This lack of any related finding supported the hypothesis 2; participants were expected to report similar patterns in financial knowledge development. Though, it should be noted that the difference between

Millennial males and females in FKF scores was approaching significance ($p = 0.06$), whereas Gen-Z male and female scores were very similar. Future research with more balanced sample sizes would better evaluate this potential difference. If families are teaching their male and female children a more even amount about finance as time goes by, this would have major implications for the field and perhaps for our culture.

Hypothesis 3 stated that there would be differences in the dependent measures across generations based on demographics. Perhaps most notably, the current study found major differences between gender and sibling birth order. Females scored higher on the financial anxiety measure (higher anxiety) and lower in financial literacy. For the entire sample, including Millennials and Gen-Zeds, there was an interaction between sibling birth order and gender on financial anxiety. Average financial anxiety scores were lowest for males who were the oldest sibling, highest for middle-child males, and in the middle for youngest males. Only-child male average financial literacy scores were level with that of youngest males. For females, the oldest, middle, and youngest females all had similar average scores. Only-child females had the lowest financial anxiety scores out of all female groups.

For the Gen-Z sample, there was an interaction between sibling birth order and gender on financial literacy scores. For non-only-child males, average financial literacy scores increased moving from oldest-child males to youngest-child males. For non-only-child females, the relationship went the opposite direction, with youngest-child females scoring the lowest and oldest-child females scoring the highest. These novel findings provide evidence of birth order effects on an individual's financial development. According to Gudmonson and Danes' (2011) financial socialization theory, one's parents are the primary source of their financial literacy

through explicit and implicit modeling. Sibling birth order may affect these processes in many ways.

Phillips et al. (1990) explored the relationship between birth order and gender on one's Type A scores. An individual higher in type A scores showed characteristics of high motivation, competitiveness, and an achievement-based orientation. They found that males rated higher in type A scores than females, first-born individuals rated higher than later-born subjects, and first-born females scored significantly higher than later-born females (Phillips et al., 1990). Type A individuals may be more likely to strive toward higher grades and learning more than those scoring lower in this domain. The findings above support the results of the present study for females; older females, scoring higher in type A traits in past research, scored higher on financial literacy than the middle-child females who scored higher than youngest-child females. This does not, however, support our findings on birth order effects on males. At the same time, the amount of time parents put into teaching their older children financial lessons may be limited due to younger siblings. Younger children take more time and effort of parents. There may also be more gender-based socialization effects to account for this interaction.

A Closer Look at Generation Z

Within Study 2, we looked at Gen-Z generational views by interviewing and examining the actual words of Gen-Zeds relating to their financial perspectives. While most said money was not discussed by their families when growing up, most participants now talk about their current financial payments with their families today. Emerging adulthood is a life stage in which individuals tend to move away from dependence on their parents and toward financial independence (Arnett, 2000). College payments and moving out from the nest seems to act as a catalyst to perhaps the first major financial discussion between parent and child. While this is a

healthy step, most individuals seem to only be talking about current financial payments and not talking about future finances. Perhaps conversations about future finances come into play once these individuals get closer to graduating from college.

There were many connections between the 10 individuals who said money was not discussed during their childhood. When asked what they learned about money from society, 8 out of these 10 individuals answered that money was everything or of the utmost importance. Of these participants, 7 out of 10 claimed to be financially happy, 6 out of 10 said that finance consumes their daily thoughts, and 7 out of 10 were female. That means that 7 out of the 8 total females had much of these answers in common compared to only 2 out of 6 males. Connecting to Study 1, the higher financial anxiety and lower financial literacy scores might be related to parents talking less about finances with their daughters. In comparison, males' higher financial confidence and literacy may simply stem from having more conversations about finance with their families during their childhood. Providing more evidence for this is the finding that only 3 out of 8 females said they were good with money compared to 5 out of 6 male interviewees. The findings within this study that add the most to the previous research literature include results related to gender and birth order effects on the financial perspectives of the oldest cohorts of the current emerging adult generation: Generation Z.

Limitations and Future Research

Although there were ties between Studies 1 and 2, these ties ended up being limited provided the collection of data on Millennial and Gen-Z subjects alone. If a limitation on collecting data on older adult populations was foreseen, both studies would have been better designed around exploring differences around these two generations. As there does not exist prior research connecting gender and birth order to financial development, many of the derived

implications from the results are speculative and require further research. The current study was overall exploratory in nature and found both strong and convincing results extracted from the data. Further limitations per each study can be found in each designated discussion section.

Future research in financial development would benefit from diving deeper into birth order and any associated effects on financial development. In hindsight, this study would have benefitted from asking more about birth order including family size, sibling age differences, and specific questions asking how influential siblings were in subjects learning about money or finance during their childhood. These differences and effects might lead to financial profiling that could narrow the gap between siblings in financial knowledge, anxiety, and comfort and provide ways for parents to better prepare their children for financial independence. Likewise, future research on gender differences could provide methods to attenuate the difference between males and females in financial literacy going forward. Increasing the financial literacy of emerging adults would have many positive cultural and economic effects to better prepare them for complete financial independence sooner. Since finance relates to the top stressors of emerging adults according to Sinha et al. (2018), creating a healthier knowledge base and level of confidence in finance would benefit populations around the world.

Financial socialization theory states that parental discussions and modeling mold the financial behaviors of their children (Gudmunson & Danes, 2011). We also know that those who acquire financially-healthy behaviors in EA are more likely to sustain healthy financial behaviors over their lifespan (Grinstein-Weiss et al., 2011). Since emerging adults' financial behaviors are so critically related to behaviors over the lifespan, bridging the knowledge gap between the generations may ease the future of the current and future young adult populations. At the same time, this research suggests that organizations need to invent ways to nudge emerging adults to

learn healthy financial behaviors sooner in life. Organizations would benefit through developing a long-term relationship with clients who they can assist in educating about finance. Our findings on parental financial socialization may provide implications on how to foster financial communication between parents and their children. Perhaps education is not the issue compared to the taboo-nature finances can take on within a family.

Bottom Line

The bottom line of these studies is that we are still in the exploratory stages regarding financial socialization and development despite the fact that the top four out of five stressors for emerging adults today are related to finance (Sinha et al., 2018). There are major differences in financial development related to one's demographics, specifically related to one's family and the taboo nature of finance and money as topics of conversation in American households. Further research needs to be conducted to dive into these differences. Young adults would be well served if they were provided a level of financial knowledge and comfort for a smooth transition from emerging adulthood into full-fledged independence in young adulthood.

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APPENDICES

Appendix A

Quantitative Survey Demographic Questions

D1. What is your gender?

- Male
- Female
- Option not above (please specify):

D2. Which geographical region do you currently live in?

- North America (US or Canada)
- Central or South America
- Western Europe
- Eastern Europe
- Asia (including Russia, Central Asia & India)
- Australia
- Middle East
- Not mentioned above (please specify):

D3. Below, you will see answers labelled 1 to 10. Each answer corresponds to the level of income and class level in society. An answer of 1 is equivalent to poverty and joblessness,

whereas an answer of 10 is equivalent to the top incomes and wealthiest part of society.

Where do you think you currently rank?

- 10 - Wealthiest
- 9
- 8
- 7
- 6
- 5
- 4
- 3
- 2
- 1 - Poorest

D4. Where did you grow up? (Where did you spend the majority of your first 18 years?)

- North America (US or Canada)
- Central or South America
- Western Europe
- Eastern Europe
- Asia (including Russia, Central Asia & India)
- Australia

Middle East

Not mentioned above (please specify)

D5. What region of the United States do you live in?

Northeast

Midwest

South

West

I do not live in the United States

D6. If you are a college student, is your major?

D7. Information about income is very important to understand. Would you please give your best guess? Please indicate the answer that includes your entire household income in (previous year) before taxes.

- Less than \$10,000
- \$10,000 to \$29,999
- \$30,000 to \$49,999
- \$50,000 to \$69,999
- \$70,000 to \$89,999
- \$90,000 to \$109,999
- \$110,000 to \$129,999
- \$130,000 to \$149,999
- \$150,000 to \$169,999
- \$170,000 or more

D8. What is your political orientation?

- Very conservative
- Conservative
- Moderate
- Liberal
- Very liberal
- Other (please specify): _____

D9. What social class do you identify with?

- Upper Class
- upper Middle Class
- Middle Class
- lower Middle Class
- Lower Class

D10. What is the highest degree or level of education you have completed?

- No High School
- Some High School
- High School Graduate/GED
- Some college credit, no degree
- Trade/technical/vocational training
- Associate's degree
- Bachelor's degree
- Master's degree
- Professional degree (e.g., Law)
- Doctorate degree
- Other (please specify): _____

D11. What is the highest degree or level of education your Mother has completed?

▼ Dropdown with same answers as questions D10

D12. When growing up, what was your family's social class?

- Upper Class
- upper Middle Class
- Middle Class
- lower Middle Class
- Lower Class

D13. What is the highest degree or level of education your Father has completed?

▼ Dropdown with same answers as questions D10/D11

D14. Out of my siblings, I am

- the Oldest
- in the Middle
- the Youngest
- I am an only child

D15. What is your employment status?

- Employed for wages
- Self-employed
- Out of work and looking for work
- Out of work but not currently looking for work

- A homemaker
- A student
- Military
- Retired
- Unable to work
- Other (please specify): _____

D16. Below, you will see answers labelled 1 to 10. Each answer corresponds to the level of income and class level in society. An answer of 1 is equivalent to poverty and joblessness, whereas an answer of 10 is equivalent to the top incomes and wealthiest part of society.

During your childhood, where would you rank your family?

- 10 - Wealthiest
- 9
- 8
- 7
- 6
- 5
- 4
- 3
- 2

1 - Poorest

D17. What is your age in numerical form (e.g. 26)?

Appendix B

Quantitative Survey Questions

Below are nineteen multiple-choice questions on your current financial opinions and background. Please answer to the best of your ability.

1. While growing up, my family talked about their finances.

- Strongly Disagree
- Moderately Disagree
- Neither Agree or Disagree
- Moderately Agree
- Strongly Agree

2. I believe the stock market is a smart place to invest my money.

- Strongly Disagree
- Moderately Disagree
- Neither Agree or Disagree
- Moderately Agree
- Strongly Agree

3. When I think of the stock market, I often think about the 2008 Financial Crisis.

- Strongly Disagree
- Moderately Disagree
- Neither Agree or Disagree
- Moderately Agree
- Strongly Agree

4. I am financially informed and good with money.

- Strongly Disagree
- Moderately Disagree
- Neither Agree or Disagree
- Moderately Agree
- Strongly Agree

5. Growing up, members of my family actively invested in the stock market.

- Strongly Disagree
- Moderately Disagree
- Neither Agree or Disagree
- Moderately Agree
- Strongly Agree

6. During my childhood, my family experienced a noticeable financial crisis.

- Strongly Disagree
- Moderately Disagree
- Neither Agree or Disagree
- Moderately Agree
- Strongly Agree

7. I have invested in the stock market.

- Strongly Disagree
- Moderately Disagree
- Neither Agree or Disagree
- Moderately Agree
- Strongly Agree

8. I would like to improve my knowledge of finances and/or investing.

- Strongly Disagree
- Moderately Disagree
- Neither Agree or Disagree
- Moderately Agree
- Strongly Agree

9. My parents are/were good with money.

- Strongly Disagree
- Moderately Disagree
- Neither Agree or Disagree
- Moderately Agree
- Strongly Agree

10. While in a relationship, my partner and I frequently discuss finances.

- Strongly Disagree
- Moderately Disagree
- Neither Agree or Disagree
- Moderately Agree
- Strongly Agree

11. When I was a child, my parents made an effort to teach me about finance.

- Strongly Disagree
- Moderately Disagree
- Neither Agree or Disagree
- Moderately Agree
- Strongly Agree

12. I learned about finance by observing family members' financial behaviors (e.g. sibling, parents, guardians, extended family, etc.)

- Strongly Disagree
- Moderately Disagree
- Neither Agree or Disagree
- Moderately Agree
- Strongly Agree

13. I feel anxious when I think or hear about the stock market.

- Strongly Disagree
- Moderately Disagree
- Neither Agree or Disagree
- Moderately Agree
- Strongly Agree

14. I believe more money leads to higher levels of happiness.

- Strongly Disagree
- Moderately Disagree
- Neither Agree or Disagree
- Moderately Agree
- Strongly Agree

15. My parents taught me a lot about money management.

- Strongly Disagree
- Moderately Disagree
- Neither Agree or Disagree
- Moderately Agree
- Strongly Agree

16. I learned about money management without the involvement of my family.

- Strongly Disagree
- Moderately Disagree
- Neither Agree or Disagree
- Moderately Agree
- Strongly Agree

17. Learning about financial investment early on in life will prove beneficial in the long run.

- Strongly Disagree
- Moderately Disagree
- Neither Agree or Disagree
- Moderately Agree
- Strongly Agree

18. I often feel nervous when thinking about my finances.

- Strongly Disagree
- Moderately Disagree
- Neither Agree or Disagree
- Moderately Agree
- Strongly Agree

19. I believe that investment can potentially influence issues such as war, climate change, and social issues.

- Strongly disagree
- Moderately Disagree
- Neither Agree or Disagree
- Moderately Agree
- Strongly Agree

20. If I wanted to increase my knowledge of investing, I believe I have the tools and resources necessary to do so.

- Strongly disagree
- Moderately Disagree
- Neither Agree or Disagree
- Moderately Agree
- Strongly Agree

21. People who talk about finance annoy me.

- Strongly disagree
- Moderately Disagree
- Neither Agree or Disagree
- Moderately Agree
- Strongly Agree

Appendix C

Lusardi and Mitchell's (2011) three-question Financial Literacy Scale

(Correct Answers in Bold)

1. Suppose you had \$100 in a savings account and the interest rate was 2% per year. After 5 years, how much do you think you would have in the account if you left the money to grow?

- More than \$102**
- Exactly \$102
- Less than \$102
- Do not know
- Refuse to answer

2. Imagine that the interest rate on your savings account was 1% per year and inflation was 2% per year. After 1 year, how much would you be able to buy with the money in this account?

- More than today
- Exactly the same
- Less than today**
- Do not know
- Refuse to answer

3. Please tell me whether this statement is true or false. "Buying a single company's stock usually provides a safer return than a stock mutual fund."

- True
- False**
- Do not know
- Refuse to answer

Appendix D

Questions within each factor

FKF Scores

1. When I was a child, my parents made an effort to teach me about finance.
2. My parents taught me a lot about money management.
3. My parents are/were good with money.
4. I learned about finance by observing my family members' financial behaviors (e.g. sibling, parents, guardians, extended family, etc.)

Financial Value Scores

1. I would like to improve my knowledge of finances and/or investing.
2. Learning about financial investment early on in life will prove beneficial in the long run.

Financial Anxiety Scores

1. I often feel nervous when thinking about my finances.
2. I feel anxious when I think or hear about the stock market.
3. When I think of the stock market, I often think about the 2008 Financial Crisis.

Appendix E

Qualitative Interview Questions Analyzed within Study 2 Results Section

1. When you were growing up, how did your family talk about finances?
2. What lessons did you learn from your family about money?
3. What lessons did you learn from society about money?
4. Are you happy with how things are financially?
5. Would you say you are too focused on finance or how's that balance?
6. Some people say that they are "good with money." Is this how you would describe yourself?
Why or why not?
7. Is having a lot of money important to you? Why or why not?
8. Do you talk about finance with your family nowadays? What about?
9. What are your financial goals to achieve by 50 years old?
10. What do you think is necessary for you to reach your financial goal?
11. How do the words "stock market" make you feel?
12. How do you see investment fitting into your own life?
13. What would need to happen for you to start investing in the stock market?
14. The past ten years have been very good for the market. What do you predict about the future of the stock market?
15. After talking about these topics, how are you feeling emotionally?

Appendix F

Original Qualitative Interview Questions

Demographics

1. How old are you?
2. What gender do you identify with? Do you have a preferred pronoun you would like me to use?
3. What race or ethnicity do you identify with?
4. What kind of place did you live in growing up... urban or rural for example? Would you consider it an affluent, middle class, or working-class neighborhood?
5. How would you describe your family's socioeconomic status when you were growing up?
6. When you were a child, how did your family's situation compare to that of your classmates'?
7. What year are you in school?
8. What is your major?

Past

9. When you were growing up, how did your family talk about finances and money?
10. What lessons did you learn from your family about money?
11. Is there anyone in your family who invests in the stock market?
How often does this individual talk about the market?

Probe: How do you feel when they talk about the markets?

12. Is there anyone in your family who lives paycheck to paycheck? How does that make you feel?

13. When you think back to when you were growing up, what messages did you receive from society about the economy?

14. What lessons did you learn from society about money?

Present

15. If you were entering a relationship with someone, how would you describe your financial self to them?

16. Do you plan on putting effort into improving your financial habits?

17. Are you happy with how things are financially?

18. Would you say you are too focused on finance?

19. How do you approach spending and saving money in your life now?

20. Some people say that they are “good with money.” Is this how you would describe yourself? Why or why not?

21. How do the words “stock market” make you feel?

Probe – Is that all?

Future

22. What are your final goals you want to achieve before turning 50 years old?

23. What do you think is necessary for you to reach your financial goal?
24. Is having a lot of money important to you? Why or why not?
25. What does having a lot of money look like in your eyes?
26. How do you see investment fitting into your own life?
27. What would need to happen for you to start investing in the stock market?
28. The past ten years have been very good for the market, what do you predict about the future of the stock market?
29. After talking about these topics, how are you feeling (emotionally)?
30. What have been some of your thoughts?