

Intergenerational linkages in debt delinquency behaviors among young adults

by

Lena Su Yuin Gan

B.A., Beloit College, 1990

M.B.A., Imperial College/University of London, 2001

M.A., University of Hawaii-Manoa, 2005

AN ABSTRACT OF A DISSERTATION

submitted in partial fulfillment of the requirements for the degree

DOCTOR OF PHILOSOPHY

Department of Personal Financial Planning
College of Health and Human Sciences

KANSAS STATE UNIVERSITY
Manhattan, Kansas

2024

Abstract

This dissertation investigates the intergenerational factors that influence financial debt delinquency behaviors in young adulthood, focusing on the roles of parent-child relationships, parental socioeconomic status, individual attitudes, norms, and perceived financial control. Guided by the Theory of Planned Behavior (TPB) and Family Financial Socialization Theory (FFST), the study employs path analysis to explore how these variables mediate financial behaviors.

Using data from the National Longitudinal Survey of Youth 1979 (NLSY79) and its Child and Young Adult Survey (NLSCYA), the research examines key pathways, including the mediating effects of risky attitudes, parental debt norms, and perceived financial control on the relationship between parental influences and debt delinquency. The findings reveal that while parental socioeconomic status and debt norms significantly affect young adults' financial behaviors, the influence of parent-child relationships on perceived financial control is more nuanced. Effect size analyses highlight the varying impact of different predictors, revealing that perceived financial control exerts a substantially greater influence on debt delinquency compared to other factors, emphasizing the importance of targeted interventions.

The study underscores the importance of considering both direct and indirect effects in understanding financial socialization. Practical implications suggest that policymakers, financial educators, and practitioners should focus on enhancing perceived financial control and shaping healthy debt norms within families to mitigate financial delinquency. Future research should address the limitations of secondary data and further refine the measurement of constructs to capture the complex dynamics of financial behavior socialization.

Intergenerational linkages in debt delinquency behaviors among young adults

by

Lena Su Yuin Gan

B.A., Beloit College, 1990
M.B.A., Imperial College/University of London, 2001
M.A., University of Hawaii-Manoa, 2005

A DISSERTATION

submitted in partial fulfillment of the requirements for the degree

DOCTOR OF PHILOSOPHY

Department of Personal Financial Planning
College of Health and Human Sciences

KANSAS STATE UNIVERSITY
Manhattan, Kansas

2024

Approved by:

Co-Major Professor
Blake Gray, Ph.D.

Approved by:

Co-Major Professor
Derek Lawson, Ph.D.

Copyright

© Lena Su Yuin Gan 2024.

Abstract

This dissertation investigates the intergenerational factors that influence financial debt delinquency behaviors in young adulthood, focusing on the roles of parent-child relationships, parental socioeconomic status, individual attitudes, norms, and perceived financial control. Guided by the Theory of Planned Behavior (TPB) and Family Financial Socialization Theory (FFST), the study employs path analysis to explore how these variables mediate financial behaviors.

Using data from the National Longitudinal Survey of Youth 1979 (NLSY79) and its Child and Young Adult Survey (NLSCYA), the research examines key pathways, including the mediating effects of risky attitudes, parental debt norms, and perceived financial control on the relationship between parental influences and debt delinquency. The findings reveal that while parental socioeconomic status and debt norms significantly affect young adults' financial behaviors, the influence of parent-child relationships on perceived financial control is more nuanced. Effect size analyses highlight the varying impact of different predictors, revealing that perceived financial control exerts a substantially greater influence on debt delinquency compared to other factors, emphasizing the importance of targeted interventions.

The study underscores the importance of considering both direct and indirect effects in understanding financial socialization. Practical implications suggest that policymakers, financial educators, and practitioners should focus on enhancing perceived financial control and shaping healthy debt norms within families to mitigate financial delinquency. Future research should address the limitations of secondary data and further refine the measurement of constructs to capture the complex dynamics of financial behavior socialization.

Table of Contents

List of Tables	ix
List of Figures	x
Preface.....	xi
Acknowledgements.....	xii
Dedication	xiv
Chapter - Introduction.....	1
Statement of the Problem.....	1
Purpose and Justification of the Study	2
Rationale	3
Significance.....	3
Need for the Study	4
Introduction to Theoretical Frameworks	4
Research Question	6
Hypotheses.....	6
Summary	7
Chapter 2 - Literature Review.....	9
What are Debt Delinquency Behaviors?.....	9
The Rising Phenomenon of Debt Delinquency Among Young Adults.....	11
The Need for a Holistic Approach	12
Theory of Planned Behavior (TPB)	14
Attitudes	18
Subjective Norms (Parental Debt Norms)	22
Perceived Behavioral Control (Perceived Financial Control)	24

Socialization Factors (Family Financial Socialization Theory).....	30
Parent-Child Relationship	30
Parental Socioeconomic Status	33
Covariates	35
Summary	39
Chapter 3 - Method	40
Hypotheses.....	41
Dataset.....	43
Sampling Procedure	45
Variables and Measurement.....	46
Dependent Variables	46
Key Independent Variables	47
Data Analysis Procedure.....	53
Missing Data	54
Descriptive Analysis	55
Path Analysis	56
Model Fit.....	57
Bootstrapping.....	58
Summary	58
Chapter 4 - Findings.....	60
Demographic Characteristics of the Sample.....	60
Results of Path Models and Tests of Hypotheses	66
Robustness Checks.....	73

Summary of Analyses	80
Path Analysis Findings	80
Robustness Checks and Model Fit	81
Conclusion	82
Chapter 5 - Discussion, Limitations, Implications, and Conclusion.....	83
Discussion on Findings	83
Limitations of the Study.....	88
Implications for Research and Practice.....	90
Implications for Policymakers	90
Implications for Financial Practitioners	93
Implications for Families and Young Adults.....	94
Conclusion and Future Research	96
References.....	98
Appendix A - Evaluation of Number of Dependents as a Covariate	114
Appendix B - Path Analysis Results	116
Appendix C - Summary of Hypotheses Testing	117
Appendix D - Effect Size Calculation for Risky Attitude, Parental Debt Norms, Perceived Financial Control on Average Debt Delinquency Score.....	118
Appendix E - Survey Questions on Main Variables	120

List of Tables

Table 1. Summary Statistics (Dependent Variable: Financial Debt Delinquency Behaviors)	64
Table 2. Summary Statistics (Key Variables: Continuous variables).....	65
Table 3. Summary Statistics (Key Variables: Categorical variables).....	65

List of Figures

Figure 1. Conceptual Diagram of Illustrating the Relationships Between Attitudes, Subjective Norms, Perceived Behavioral Control, and Behavior	16
Figure 2. Family Socialization Process and Financial Behavior Outcome	31
Figure 3. Theoretical and Conceptual Model	35
Figure 4. Visual Representation of the Conceptual Model	41
Figure 5. The Path Model	42
Figure 6. Comparison of Delinquency Rates Between Young Adults With and Without Emergency Savings Fund.....	62

Preface

My daughter's college graduation in 2022 sparked a reflection on my dual roles as a mother and a financial advisor of over 20 years. As she embarked on her adult life, I found myself questioning the impact of the teachable moments/life lessons I had imparted, both explicitly and implicitly, throughout her upbringing. This personal moment of introspection gave rise to broader questions about the intergenerational dynamics of financial behavior. I began to wonder: In shaping young adults' financial decisions, what carries more weight—the foundational '*roots*' we provide as parents, the independent '*shoots*' they develop, or the intricate interplay between the two? The curiosity evolved into a scholarly pursuit, leading me to undertake this dissertation. Through this research, I seek to unravel the complex relationships between parental influence, individual attitudes, social norms, and perceived control in molding the financial behaviors of young adults.

I hope this study will not only contribute to academic knowledge but also offer practical insights for parents, educators, and policymakers in fostering financially responsible adults. After all, each of us plays a part in cultivating the financial well-being of future generations.

Acknowledgements

The PhD experience has been a remarkable journey, made possible by an academic community of extraordinary individuals. I am deeply grateful to my amazing dissertation co-advisors, committee members, and the many others who have supported me throughout this process.

I extend my heartfelt thanks to Dr. Blake Gray, who has been a constant source of support and guidance through the thick and thin of completing this dissertation. Thank you, Dr. Gray, for always being there for me. A special thanks to Dr. Derek R. Lawson for introducing me to the world of SEM, which has been integral to my research.

I am immensely grateful to Dr. Megan McCoy for introducing me to the family financial socialization theory, for your invaluable feedback, and for your support and encouragement, always accompanied by your infectious laugh and your ever-present positivity. Dr. Joyce Baptist, thank you for your insights into family science and advice on thriving in relationships. *Terima Kasih!* I am also equally grateful to Dr. Martin Seay for his priceless advice throughout this journey and to Ms. Morgan Graham for keeping me on track with my PhD requirements at Kansas State.

I am also deeply appreciative of the luminaries who graciously granted me permission to use their copyrighted works, which form the foundation of my dissertation. Dr. Icek Ajzen, Emeritus Professor of Psychology at the University of Massachusetts, thank you for your inspiring words and allowing me to use your renowned Theory of Planned Behavior framework, which was central to my dissertation. Special thanks to Mr. Steve McClaskie of CHRR at The Ohio State University for guiding me through the complexities of the NLSY datasets, and to Dr. Karleah Harris at the American Association of Family and Consumer Science (AAFCS) and Dr.

Sonia Hall at BioKansas for their mentorship. Lastly, I am grateful to Dr. Stacey Myles for her meticulous editing and formatting of this dissertation.

Each of you has contributed in unique and significant ways to my success on this journey, and for that, I am profoundly thankful. *Mahalo Nui Loa!*

Dedication

This dissertation is first and foremost dedicated to my Lord and Savior, Jesus Christ. Through His blessings, this work was made possible.

Second, to my dearest husband, best friend, and soul mate, Curtis. Thank you for your committed love and unwavering support; for eating out when I was busy, for taking long walks on the beach to explore research ideas, and for binge-watching Korean dramas with me during my breaks.

To Sara, my beloved daughter, and to Dennis and David, my cherished brothers, who have been cheering for me from the sidelines over the years. Thank you for being part of my wonderful family!

I also dedicate this work to my late parents, Betsy and Kong Hwee, for their unspoken yet profound encouragement as Asian parents who loved me deeply. They taught me that there are three types of people in this world: those who make things happen, those who watch things happen, and those who wonder what happened. Completing this work at the age of 56, I am grateful for their lesson that it's never too late to make things happen and to embrace every new beginning with joy and gratitude.

Chapter - Introduction

The financial debt crisis among young adults (aged 18–25) in the United States is a pressing socioeconomic issue, underscored by increasing levels of student loans, credit card, housing, and healthcare debt (Council on Foreign Relations, 2021; Dickler, 2022; Martinchek et al., 2022; Martinchek, 2024; Rakshit et al., 2024). This situation, worsened by growing economic disparities (Addo et al., 2016, 2018; Houle & Addo, 2019; Trevordelaney, 2023), raised critical questions about the underlying factors contributing to young adults' financial difficulties. While economic and social factors provide essential insights into debt delinquencies, the comprehensive meta-analysis by Leandro and Botelho (2022) emphasized the complexity of consumer indebtedness, highlighting a gap in understanding the role of intergenerational dynamics. This gap underscored the critical need for deeper exploration into how parents shape their children's financial behaviors as adults (Gauly, 2017; Kim et al., 2011; LeBaron-Black et al., 2022; Tang, 2017; Vosylis & Erentaite, 2020). The question thus arises: To what extent are young adults' financial behaviors, particularly those associated with debt delinquency, a reflection of transmitted attitudes, norms, and perceived financial control from their parents? Exploring these intergenerational linkages and the dynamics between parent-child relationships and parental socioeconomic status provided insights into the underlying factors contributing to the current debt crisis among young adults.

Statement of the Problem

Nearly one in five young adults aged 18 to 25 in the United States faces debt in collections due to various financial obligations (Dickler, 2022; Martinchek et al., 2022), a situation that initiates significant personal and societal challenges. For example, a recent report showed that 71% of all student loan borrowers were delaying major life events such as buying a

home or getting married (Gallup, 2023). Studies also showed that high personal debt not only creates financial strain but also correlates with serious personal consequences, including decreased physical and mental health, increased substance abuse, criminal behaviors, and reduced subjective well-being (Bjerk, 2007; Drentea, 2000; Hoeve et al., 2014; Kim & Chatterjee, 2021). These adverse effects further exacerbate broader socioeconomic disparities, underscoring the need for a thorough examination of underlying causes and potential interventions (Addo et al., 2016; Houle & Addo, 2019; Houle, 2019).

Considering these consequences, it is important to recognize that young adulthood represents an important period that establishes the foundation for lifelong financial patterns (Agarwal et al., 2023; Allsop et al., 2021; Kim & Torquati, 2022; Serido et al., 2020; Shim et al., 2010; Xiao & O' Neill, 2016). Therefore, this study investigated how familial and societal environments shaped young adults' risky attitudes, norms, and perceptions of financial control. Findings from this study can guide the development of interventions and policies aimed at promoting responsible financial behaviors, ultimately leading to financial stability and security.

Purpose and Justification of the Study

This study aimed to explore the factors contributing to financial debt delinquency among young adults. It investigated how young adults' attitudes toward risk, parental debt norms, and perceived financial control—shaped by parent-child dynamics and the broader socioeconomic conditions of their households—affected their delinquent financial behaviors. By uncovering the potential pathways associated with these parental influences, this research provides a basis for developing targeted interventions to foster responsible financial behaviors among young adults. The goal was to enhance the understanding of the intergenerational influences of financial behaviors and to identify the key familial dynamics that contribute to financial debt delinquency

in young adulthood. The significance of this study lies in its potential to inform policy initiatives, financial education programs, and family interventions aimed at promoting financial responsibility and reducing the risk of debt delinquency among young adults.

Rationale

The rationale for investigating the intergenerational dynamics of financial debt delinquency among young adults was driven by the financial instability observed in this demographic group, characterized by rising debt levels across various types of debt. Research suggests that the financial behaviors of young adults are shaped by their formative years and parental guidance (Gudmunson & Danes, 2011; Shim et al., 2010; Tang, 2017; Webley & Nyhus, 2006). Given the influence of familial and socioeconomic backgrounds, it was necessary to explore these intergenerational transmissions and uncover the mechanisms shaping financial behaviors (Tang, 2017; Xiao et al., 2011). Findings from this study provided a comprehensive understanding needed for developing interventions that address the underlying causes of financial delinquency among young adults.

Significance

This study contributed to the body of knowledge in the field of financial planning by highlighting the role of familial influences on financial behaviors, offering insights for financial educators, practitioners, policymakers, and families. The significance of understanding intergenerational linkages lies in its potential to incorporate family dynamics and socioeconomic factors in its financial literacy program (Fan & Chatterjee, 2019; Pak et al., 2023; Serido & Deenath, 2016). Additionally, by analyzing the effect sizes of key relationships, this study underscores the relative impact of various familial and individual factors on financial behaviors. Findings from this study can guide evidence-based decision making for multiple stakeholders.

For instance, policymakers can use this information to evaluate the potential cost-effectiveness of different interventions, weighing both statistical significance and economic benefit before allocating resources. Financial advisors can tailor their strategies to address the most influential factors affecting young adults' financial behaviors and educators can design curricular that focus on developing the skills with the greatest impact on financial outcomes. assist policymakers, financial advisors, and educators in developing interventions to enhance financial competence and security among young adults.

Need for the Study

The growing financial difficulties faced by young adults, characterized by rising debts and the complexities of intergenerational financial behaviors, underscored the significance of this study. Existing literature has often overlooked the role of family dynamics and the passing down of financial behaviors across generations (Britt, 2016; Damian et al., 2020; Horner et al., 2016; Tang, 2017). This research focused on the effects of parent-child relationships and parental socioeconomic status, aiming to identify strategies that mitigate financial insecurity and promote sound and responsible financial behavior among young adults, thus addressing a gap in existing studies.

Introduction to Theoretical Frameworks

This study was based on two theoretical frameworks: The theory of planned behavior (TPB) (Ajzen, 1991) and the family financial socialization theory (FFST) (Gudmunson & Danes, 2011). TPB posits that an individual's behavior is directly influenced by their intention to perform that behavior, which in turn is shaped by their attitudes, subjective norms, and perceived behavioral control. This framework provided the foundation for understanding how young adults' financial behaviors were influenced by their attitudes towards risk, the parental debt

norms they were exposed to, and their perceived ability and control to manage financial obligations effectively.

The FFST complemented TPB by emphasizing the role of the family in the financial socialization process. Interactions within the family unit, such as parent-child closeness, parental modeling, and the household's overall financial resources, significantly influenced financial attitudes, knowledge, and behaviors (Gudmunson & Danes, 2011; Kim & Chatterjee, 2013). This theory underscored the importance of examining the quality of the parent-child relationship and parental socioeconomic status in understanding the financial behaviors of young adults (Gudmunson & Danes, 2011).

This study utilized the National Longitudinal Survey of Youth 1979 (NLSY79) and its companion, the National Longitudinal Survey of Youth 1979 Child and Young Adult (NLSCYA) dataset, both of which are part of the National Longitudinal Surveys program conducted by the U.S. Bureau of Labor Statistics. These datasets provided a unique platform for cross-generational research, capturing a broad spectrum of data points, including education, employment, health, and family dynamics. The NLSCYA extended the inquiry to the biological children of the NLSY79, enabling a detailed analysis of how parental characteristics and behaviors influenced young adults' financial outcomes, such as debt delinquency behaviors. By integrating constructs from the theory of planned behavior, specifically general attitudes towards risk, parental debt norms, and perceived financial control, and family financial socialization theory, particularly the parent-child relationship and parental socio-economic status, this analysis explored the transmission of financial attitudes and behaviors across generations. By examining how these factors interact, this study provided comprehensive insights into the pathways through

which financial behaviors are developed and transmitted, highlighting the potential interventions to mitigate the risk of debt delinquency among young adults.

Research Question

The theoretical frameworks discussed in the previous sections guided the development of the following research question and hypotheses:

How do intergenerational factors, such as parent-child relationship and parental socioeconomic status, influence financial debt delinquency behaviors in young adulthood, and to what extent are these relationships mediated by individual risky attitude, parental debt norms, and perceived behavioral control?

Hypotheses

- H1:* There is a positive relationship between the parent-child relationship during adolescence and perceived financial control in young adulthood.
- H2:* Perceived financial control mediates the relationship between the parent-child relationship during adolescence and financial debt delinquency behaviors in young adulthood.
- H3:* Parental socioeconomic status during adolescence has a positive relationship with risky attitude during adolescence.
- H4:* Risky attitude has a negative relationship with financial debt delinquency Behaviors in young adulthood.
- H5:* Risky attitude mediates the relationship between parental socioeconomic status during adolescence and financial debt delinquency behaviors in young adulthood.
- H6:* Parental socioeconomic status during adolescence has a negative relationship with parental debt norms during adolescence.

- H7:* Parental debt norms during adolescence have a positive relationship with financial debt delinquency behaviors in young adulthood.
- H8:* Parental debt norms mediate the relationship between parental socioeconomic status during adolescence and financial debt delinquency behaviors in young adulthood.
- H9:* Parental socioeconomic status during adolescence has a positive relationship with perceived financial control in young adulthood.
- H10:* Perceived financial control in young adulthood has a negative relationship with financial debt delinquency behaviors in young adulthood.
- H11:* Perceived financial control mediates the relationship between parental socioeconomic status during adolescence and financial debt delinquency behaviors in young adulthood.

Summary

Young adults in the United States are facing an escalating crisis of financial debt, and this chapter highlighted the need to investigate the underlying factors contributing to this issue, particularly the role of parental influences, including financial behaviors, parent-child relationships, and parental socioeconomic status. This study employed the theory of planned behavior (TPB) and the family financial socialization theory (FFST) as theoretical frameworks to understand the relationship between individual predispositions and familial influences on financial decision-making. The National Longitudinal Survey of Youth 1979 (NLSY79) and its companion study, the National Longitudinal Survey of Youth 1979 Child and Young Adult (NLSCYA), made it possible to investigate how different generations affect financial behaviors.

This chapter introduced an examination of the intergenerational transmission of financial debt delinquency among young adults, establishing a framework for analyzing the complex factors influencing financial behavior and outcomes. By highlighting the importance of understanding these intergenerational linkages, the research aimed to inform strategies that could mitigate financial vulnerability and promote long term financial security and stability for young adults.

Chapter 2 - Literature Review

The purpose of this study was to investigate whether intergenerational influences and their related psychological processes were associated with financial debt delinquent behaviors among young adults. This chapter was organized into five distinct sections. The first section defines the term financial debt delinquency. The second section contextualizes the phenomenon of financial debt delinquency behaviors among young adults in the United States, underscoring the inadequacy of traditional finance theories in explaining this complex behavior. The third section argues for the relevance of the theory of planned behavior (TPB) and the family financial socialization theory (FFST) as guiding frameworks for this study. In addition, the section cites pertinent empirical studies and presents a theoretical and conceptual model for this study. The fourth section delves deeper into additional individual socioeconomic and demographic factors that shape debt delinquency behaviors but were used as covariates in the study. The final section synthesizes the chapter's key insights, identifies literature gaps, and highlights the contribution of this study to understanding intergenerational linkages to financial debt delinquency behaviors among young adults.

What are Debt Delinquency Behaviors?

Financial debt delinquency, a specific aspect of consumer indebtedness, refers to the failure to meet debt obligations in a timely manner (Leandro & Botelho, 2022). This encompassed a range of issues, including late payments on loans, mortgage payments, hire purchase installments, credit card debt, and chronic issues with debtors being behind on payments by 60 days or more (Betti et al., 2007; Kuhnen & Melzer, 2018; Letkiewicz & Heckman, 2019; Xiao & Yao, 2014). Additionally, it involves individuals who struggle continuously to meet repayment deadlines, make undue sacrifices to manage loan obligations

(Schicks, 2014), and are unable to maintain their current credit repayments and other financial commitments without reducing their expenditures below a normal minimum level (Brennan & Gallagher, 2007). Such challenges often led to unmanageable debt levels (Patel et al., 2012) and may result in severe financial distress, demonstrated through bankruptcy, foreclosure, credit denial, unreasonable harassment by creditors, and a disproportionate payment-to-income ratio (Bricker & Thompson, 2016; Chamboko et al., 2017; Patel et al., 2012).

In particular, young adults who frequently make late payments often find it challenging to fulfill their credit obligations without substantially reducing necessary expenses. This situation can result in severe financial distress, lower credit scores, excess late fees, higher interest rates, increased difficulty in obtaining loans, significant life delays such as purchasing a home or starting a family, and even criminal behaviors (DeMarco et al., 2021; Hoeve et al., 2014, 2018; Kim & Chatterjee, 2021; Letkiewicz & Heckman, 2019). Scholars have employed a range of methodologies to capture the complexity of financial debt delinquency. For instance, Xiao and Yao (2021) defined delinquency using multiple indicators, including a debt payment to income ratio over 40%, being late on payments for 60 or more days, and conditions of insolvency. Xiao and Kim (2021) analyzed delinquency across three types of debts—mortgages, credit cards, and student loans—highlighting the different combinations of delinquency issues that can arise, thereby providing a comprehensive view of debt behaviors.

Similarly, Kuhnen and Melzer (2018) and Letkiewicz and Heckman (2019) measured the instances of delayed payments and the subsequent severe consequences like debt collection, foreclosure proceedings, and bankruptcy filings. Given the diverse methodologies in existing literature, this study defined financial debt delinquency as encompassing all forms of late payments exceeding 60 days within the previous year, including significant financial setbacks

such as collections, repossessions, foreclosures, and bankruptcies experienced during the same period. This operational definition aligned with this study's aim to comprehensively understand the behaviors contributing to financial debt delinquencies among young adults, providing a clear framework for analysis and discussion.

The Rising Phenomenon of Debt Delinquency Among Young Adults

In recent years, financial delinquency rates for young adults have surged to levels reminiscent of the 2007–2009 global financial crisis (Sanchez & Wilkinson, 2023). This trend, characterized by delayed or failed debt obligations, challenges the explanatory power of traditional finance and economic theories. For instance, a cost-benefit analysis would suggest that young adults should compare the costs of debt repayment, such as interest payments or penalties, to the benefits, like improved credit scores or financial stability, and determine the optimal decision regarding debt repayment. However, actual consumer behaviors may deviate from the assumptions of rationality and utility maximization, particularly among different life stages. For example, younger households are more financially distressed compared to their older counterparts.

Furthermore, among younger households with children, financial distress increases the likelihood of debt delinquency among American families Chantarat et al., 2020; (Xiao & Yao, 2014). This finding aligns with the life cycle hypothesis, which provides a theoretical basis for understanding why a rational choice for young adults is to accumulate debt, especially those with children. The life cycle hypothesis posits that individuals strive to maximize their lifecycle utility by making intertemporal consumption choices, which may involve borrowing to bridge the gap between current income and desired consumption levels, particularly during financially constrained life stages (Ando & Modigliani, 1963; Modigliani & Brumberg, 1954;).

Consequently, it is important to acknowledge that debt delinquency among young adults, especially those with children, may not necessarily be a purely irrational behavior but rather a rational choice to meet consumption needs, given their life stage and financial circumstances.

While the life cycle hypothesis and rational choice theory offer valuable frameworks for understanding consumer behavior, they have limitations in fully capturing the complexities of financial decision-making, especially among different life stages. Behavioral economics, drawing from psychological principles and empirical observations, suggests that cognitive limitations, biases, and uncertainties in the economic environment may lead to deviations from purely rational behavior (Kahneman & Tversky, 1979; Shefrin & Thaler, 1988; Webley & Nyhus, 2006). The limitations of traditional theories underscore the need for an interdisciplinary perspective in understanding the factors influencing debt delinquency behaviors among young adults. By integrating insights from behavioral economics, sociology, and psychology, a more comprehensive understanding of financial decision-making processes and the relationships between individual, familial, and environmental factors can be achieved.

The Need for a Holistic Approach

Scholars in the financial planning industry have emphasized the need for an interdisciplinary approach to better understand the complexities of financial behaviors (Bogan et al., 2020; Ozmete & Hira, 2011; Xiao, 2008; Yeo, 2023). This view is supported by Kwasnicka et al. (2016), in their systematic review of over 117 behavioral theories, highlighting the necessity of considering a wide range of factors, including motives, self-regulation, psychological and physical resources, and social and environmental factors, to comprehend human behavior. Sociological factors provide insights into the familial and societal processes that shape financial attitudes, values, and behaviors, such as the importance of family

interactions and societal influences in shaping the child's financial learning experiences, development of financial knowledge, skills, and norms (Bulbolz & Sontag, 1993; Jorgensen, 2007). Mothers' attitudes have also been found to be associated with a young adult's credit card balance (Henager et al., 2013) and risk preference (Alan et al., 2017). Furthermore, maternal financial modeling also predicted both a greater frequency of positive financial behaviors and more financial preparedness among young adults (Clark et al., 2005). These findings highlighted the role of familial influences in shaping financial behaviors.

Psychological components, particularly cognitive processes, emotions, and social influences, play a crucial role in financial decision-making (Ozmete & Hira, 2011; Yeo et al., 2023) alongside sociological factors. For instance, Xiao and Kim (2022) found that cognitive ability, such as financial capabilities, moderated the relationship between debt delinquencies in mortgages, credit cards, and student loans and financial stress. Moreover, recent research has highlighted the importance of smart risk-taking attitudes in financial decision making (Holmes, 2004; Hoskisson et al., 2016; Kish-Gephart & Campbell, 2015). This concept acknowledges that while some level of risk taking is necessary for financial growth, it must be balanced with informed decision-making and an understanding of potential consequences, thus providing a more nuanced perspective of risky attitudes (Grable & Joo, 20014; Weber et al., 2002). Additionally, socio-economic challenges, such as unanticipated negative events like loss of job or divorce, contribute significantly to delinquency risks, with borrowers' income being only moderately related to the risk of default (Durand, 1941; Getter, 2003).

Given the interplay of these sociological, psychological, and socio-economic factors, a holistic approach to understanding young adults' debt delinquency behavior is needed. By integrating socio-psychological constructs with familial influences, this study aimed to explore

how intergenerational transmission through implicit socialization processes collectively was associated with financial behaviors (Abdul-Ghafoor et al., 2024; Agnew, 2018; Damien et al., 2020; Deenath & Jang, 2019; Fan & Chatterjee, 2019; Fan et al., 2022; Jorgensen & Savla, 2010; Jorgensen et al., 2017).

To achieve this goal, this study drew upon two key theoretical frameworks: the TPB and FFST. The TPB accounted for the process by which attitudes, social norms, and perceived behavioral control (PBC) influence behavior. The FFST focused on the formation of those attitudes, norms, and perceptions of control and self-efficacy through familial interactions and socialization processes. Both frameworks incorporated psychological and socio-cultural predictors to explain debt delinquency behaviors among young adults.

The following subsections delve into the core principles of TPB and FFST, their relevance to financial behaviors, and the empirical evidence supporting their application in the context of debt delinquency. In addition, individual characteristics, such as income, age, race, gender, marital status, educational levels, and having an emergency savings fund, are examined as covariates, as these variables play an important role in financial behaviors and are essential for unpacking the influences on debt delinquency, facilitating a more granular analysis of how familial and personal factors intersect and shape financial outcomes.

Theory of Planned Behavior (TPB)

The TPB has gained significant traction in consumer behavior research as a valuable framework for understanding and predicting consumer actions. A systematic review of 118 scientific, peer-reviewed articles confirmed the increasing prevalence of TPB among researchers in the field of consumer behavior research (Rozenkowska, 2023). Researchers value TPB for its ability to investigate the factors that precede consumer behavior, such as attitudes, subjective

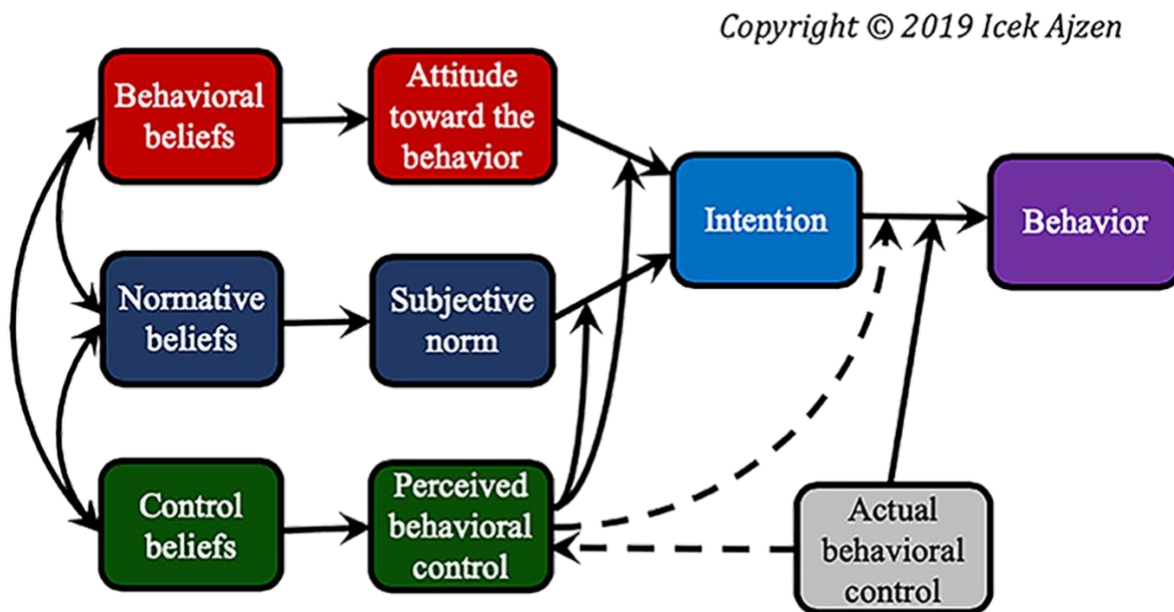
norms, and perceived behavioral control (Chundry et al., 2009; Magwegwe & Lim, 2021; Rutherford & DeVaney, 2009; She et al., 2024; Xiao et al., 2011; Zimmerman et al., 2015). By focusing on these key determinants, TPB provided a structured approach to analyzing and predicting consumer actions (Rozenkowska, 2023), making it a valuable tool for researchers and practitioners alike.

At its core, the TPB served as a foundational framework for understanding and predicting human behavior across various domains. It posits that an individual's intention is the primary determinant of that behavior, shaped by three key components: attitudes towards that behavior, subjective norms (perceived social pressure to perform or not perform the behavior), and perceived behavioral control (the perceived ease or difficulty of performing the behavior) (Fishbein & Ajzen, 1975). This theory evolved from the Theory of Reasoned Action (TRA) by incorporating perceived behavioral control, acknowledging the role of external barriers and individuals' beliefs about their capability to perform a behavior (Madden et al., 1992). This additional perceived behavioral control enhanced TPB's predictive accuracy, especially in situations where individuals face constraints (Ajzen, 1991). Perceived behavioral control was incorporated into TPB to account for the uncontrollable aspects that exist in all behaviors, acknowledging that unexpected challenges can be encountered daily and the ability to control behavior varies in intensity rather than being fundamentally different (Ajzen, 2002).

A critical aspect of TPB is the principle of compatibility, which emphasized the alignment of attitudes, subjective norms, and perceived behavioral control with the specific behavior under examination (Ajzen, 2002). This principle underscored the importance of precisely defining and measuring the components in relation to the target behavior. Each component played a pivotal role: attitudes reflect beliefs about expected outcomes; subjective

norms capture perceived social pressures to engage or not engage in a behavior, encompassing both injunctive (what important others think one should do) and descriptive norms (what important others are doing) (Ajzen, 1991). Perceived behavioral control assesses the individuals' confidence in their ability to perform a behavior, gauges self-efficacy, considering skills, resources, and external constraints. It directly impacted not only their intentions but also the likelihood of engaging in the behavior itself, serving as a bridge between intention and action. Together, these elements influenced individuals' intentions and, consequently, their behaviors (see Figure 1).

Figure 1.
Conceptual Diagram of Illustrating the Relationships Between Attitudes, Subjective Norms, Perceived Behavioral Control, and Behavior



Note: Adapted from: “the theory of planned behavior”, Ajzen, I., 2019. Copyright 2019

Icek Ajzen. <https://people.umass.edu/ajzen/tpb.diag.html>.

The TPB has proven to be a versatile and effective framework for investigating a wide range of financial behaviors across diverse demographic populations. Researchers successfully applied TPB to explore retirement planning among working adults in Malaysia (She et al., 2024) and the Netherlands (van Dam et al., 2009), financial inclusion among young adults in Nigeria (Musa, 2024), household savings behavior in Greece (Satsios et al., 2018), and personal finance management practices among employees in Taiwan's electronics industry (Shih et al., 2022). In the U.S., adaptations of the TPB model have extended to examine individual retirement account ownership (Magwegwe & Lim, 2021), convenience usage of credit card users (Rutherford & DeVaney, 2009), risky credit behaviors (Xiao et al., 2011), credit counseling programs (Xiao & Wu, 2008), and savings (Shim et al., 2012).

Furthermore, researchers successfully addressed data limitations by employing proxies in the TPB variables. For example, Zimmerman et al. (2015) utilized proxies in their study on financial behaviors among low and moderate-income households using data from the National Longitudinal Survey of Youth 1979 (NLSY79). Rutherford et al. (2009) faced the challenge of lacking direct questions related to credit card usage behaviors in their dataset and instead used general attitudes and risk tolerance as proxies to predict money management. Scholars have also either modified, reduced, or expanded on the TPB framework. For instance, Magwegwe and Lim (2021), She et al. (2024), and Xiao and Wu (2008) added an additional predictor to their TPB model, while Zimmerman et al. (2015) used a reduced model of TPB by omitting the intention component to explore factors associated with transitioning off earned income tax credit (EITC) among low-income populations. Both Chundry et al. (2011) and Xiao et al. (2011) expanded on the TPB framework to explore antecedents of debt and borrowing behaviors. In Xiao et al.'s (2011) study, the researchers extended the TPB framework to include antecedents and

consequences of risky credit behavior among college students, replacing perceived behavioral control with financial self-efficacy and controllability.

By integrating parental socioeconomic status and financial knowledge into the TPB model, Xiao et al. (2011) found that the external factors (i.e., parental SES and financial knowledge) were statistically significant on TPB variables, allowing for a more thorough analysis of the determinants of financial behaviors among college students, underscoring the importance of external factors when studying a specific population (Xiao et al., 2011). In short, these empirical studies using different datasets and methodologies provided invaluable insights into how TPB can be applied in different research contexts, even with inherent limitations.

This study expanded on the extended model used by Xiao et al. (2011) to explore whether the external factors, expressed as intergenerational linkages, were associated with the attitudes, social norms, and perceived behavioral control on the financial debt delinquency behaviors among young adults. Ajzen and Fishbein (2005) highlighted the importance of incorporating background factors such as prior experience, knowledge, and socioeconomic resources into the TPB framework. These factors are critical as they can significantly modify the traditional constructs of TPB—attitudes, norms, and perceived control—enhancing the model’s applicability and predictive power in specific contexts (Armitage & Conner, 2001; Ajzen, 1991; Ajzen & Fishbein, 2005; Fishbein & Ajzen, 2010). The following section addresses the three key components of the TPB framework.

Attitudes

Attitudes, a key component of the TPB, are defined by Ajzen (1991) as an individual’s overall evaluation of a particular behavior. In the TPB framework, attitudes are considered to be one of the primary predictors of behavioral intentions, which in turn predict actual behavior. The

theory posits that more favorable attitudes towards a behavior generally lead to stronger intentions to engage in that behavior (Ajzen, 1991). In financial planning studies, attitudes are often associated with risky actions that tend to be viewed negatively, characterized by a lack of self-control (Gerhardt et al., 2017; Tang, 2017; Wärneryd, 1996), or impulsivity (Abrantes-Braga & Veludo-de-Oliveira, 2020; Henager et al., 2013; Sekścińska & Markiewicz, 2020). These are typically operationalized using domain-specific measures. For example, Xiao et al., (2011) measured attitudes towards risky behaviors such as spending within a budget, paying credit card balances in full each month and saving money each month for the future. Similarly, Rutherford and DeVaney (2009) assessed attitudes toward credit card usage, risky tolerance, and financial planning horizons.

The measurement of attitudes in TPB studies can vary. Some researchers use direct measures of attitudes towards specific behaviors, while others employ proxy measures when working with secondary datasets. For instance, Zimmerman et al., (2015) used time preference and self-esteem as proxies for financial attitudes, while Magwegwe and Lim (2012) measured attitudes towards owning an IRA account using items related to planning horizon, goal setting, and risk tolerance. Almeida et al., (2021) used both general attitude towards debt and specific attitudes towards borrowing money for different purposes to predict over-indebtedness (beyond indebtedness status). Shim et al., (2012), in a longitudinal study, measured respondents' attitudes on items related to saving, investing, and learning about money management.

Empirical studies have consistently found significant relationships between attitudes and financial behaviors. Chien and DeVaney (2001) created an attitude index measuring both general and specific attitude towards borrowing, finding that a higher index indicated a more favorable attitude toward credit. Henager et al. (2013) examined the relationship between parental risk

attitudes and children's credit card behaviors, measuring risk attitudes through statements about enjoying risks and new experiences. These studies demonstrated that attitudes, whether measured through general or domain-specific questions, were significantly associated with financial behaviors.

However, it is important to note that the relationship between attitudes and behaviors is not always straightforward. Some researchers found a positive association between favorable attitudes towards credit and increased use of credit (Canner & Cynrak, 1985; Godwin, 1998; Norton, 1993; Park, 1993), while others have found weak, or inconsistent relationships (Bizner & Krosnick, 2001; Chien & DeVaney, 2001; Cooper & Croyle, 1984; Warneryd, 1999; Yuan et al., 2023; Zhu & Meeks, 1994). For instance, Warneryd (1999) and Yuan et al. (2023) argued that the weak relationship was caused by the differences in the definition and measurement of attitude. These mixed findings underscore the complexity of the attitude-behavior relationship and the importance of careful measurement and interpretation.

Despite these complexities, the explanatory power of attitudes in predicting behaviors remain significant. Armitage and Conner (2001) emphasized the importance of understanding the specific beliefs that contribute to these attitudes, as they directly impact an individual's intentions and subsequent behaviors. It is crucial to note that within the TPB framework, risky attitudes are not inherently negative. Some researchers have also portrayed risky attitudes as potentially favorable or positive, such as 'smart risk-taking attitudes' (Holmes, 2004; Kish-Gephart & Campbell, 2015). The TPB does not specifically state that only risky (negative) attitudes should be considered. Instead, it argues that attitudes encompass specific beliefs and evaluations related to behaviors (Ajzen, 2002).

Attitudes are measured in terms of their direction (positive or negative) and strength regarding specific behaviors, with a stronger positive attitude generally leading to a stronger intention to engage in the behavior (Ajzen & Fishbein, 2005). While Ajzen (1991) suggests that direct measures of attitudes towards specific behaviors are preferable, the use of general attitudes or proxies becomes necessary when working with existing datasets. In the context of this study, the attitude component of the TPB was conceptualized as a general disposition to engage in smart-risk taking behaviors, which may involve making calculated risks and informed decisions, rather than reckless actions. This conceptualization aligns with research suggesting that smart risk-taking attitude (Holmes, 2004; Kish-Gephart & Campbell, 2015), often found in upper social classes (Browne et al., 2021; Côté, 2011; Kish-Gephart & Campbell, 2015; Krueger & Dickson, 1994), may result in favorable positive behaviors. Individuals from higher socioeconomic backgrounds have been found to be more likely to engage in financial behaviors that involve some level of risk but are ultimately beneficial but are ultimately beneficial, such as investing in education or starting a business (Hoskisson et al., 2016).

This perspective suggests a positive relationship between higher parental socioeconomic status and risky attitudes that are favorable (smart risk-taking attitudes). Furthermore, it implies a negative relationship between these favorable risky attitudes and negative or unhealthy financial practices. In other words, a general propensity for risk-taking, when coupled with the resources and knowledge often associated with higher socioeconomic status, may lead to more sophisticated financial decision-making and a lower likelihood of debt delinquency. This interpretation is consistent with both TPB and FFST, highlighting how family economic background can shape not only specific financial attitudes, but also general risk attitudes that may have positive financial outcomes.

Subjective Norms (Parental Debt Norms)

In the TPB, subjective norms are a key determinant of behavioral intentions, distinct from personal attitudes and perceived control (Ajzen, 1991). Subjective norms refer to the perceived social pressure to perform or not perform a particular behavior based on the expectations of important others (Ajzen, 1991). In other words, if significant others advocate for a behavior, an individual is more likely to intend to perform that behavior. This concept emphasized that behaviors were not solely driven by personal attitudes and perceived control but were significantly shaped by the social environment and expectations (Ajzen, 1991).

Empirical studies within the TPB framework have operationalized and measured subjective norms in various ways to better understand their influence on behavior. For example, Xiao et al. (2011) investigated the impact of parental and friends' norms on college students' risky credit behaviors, such as keeping a credit card balance of more than \$1,000. They assessed parental and friends' norms using three questions, where each item was calculated as the product of parental expectation and the student's motivation to comply. This approach aligns with the TPB framework, suggesting that subjective norms are determined by the combination of normative beliefs (i.e., beliefs about the expectations of important others) and motivation to comply with those beliefs (Ajzen, 1991). Xiao et al. (2011) found that both parental and friends' norms had significant impacts on young adults' risky credit behaviors, highlighting the importance of subjective norms in shaping financial behaviors.

Building on this understanding, other studies further explore the breadth of subjective norms' impact. Xiao and Wu (2008) examined the role of subjective norms in the context of debt management plan completion, measuring subjective norms as the extent to which respondents thought their families and close friends encouraged them to stay and complete the debt

management plan. This study underscored the influence of both family and peers on debt-related behaviors. Similarly, Shim et al. (2012) investigated the impact of parental norms, defined as subjective norms or expectancy values, on college students' saving and future-oriented financial behaviors. They used similar questions for measuring subjective norms as they did for attitude, demonstrating flexibility in measuring subjective norms when aligned with specific behaviors of interest.

The studies by Xiao et al. (2011), Xiao and Wu (2008), and Shim et al. (2012) provided valuable insights into the measurement and impact of subjective norms on young adults' financial behaviors. While these studies varied in their specific measures of subjective norms, they all highlight the importance of considering the influence of important others, particularly parents, on young adults' debt-related behaviors. In the context of this study, focusing on parental debt norms as a specific type of subjective norm was crucial for understanding the factors that shaped young adults' debt delinquency behaviors.

Given the inherent limitations of using a secondary dataset, directly measuring parental debt norms from the young adults' perspective was not possible, as the dataset did not include questions posed to the young adults about their perceptions of their parents' attitudes towards debt. Instead, the available data captured parents' responses to questions about their own debt-related behaviors. Despite this limitation, the studies discussed above-provided guidance on how to adapt the measurement of subjective norms to fit the constraints of the available data. Proxy measures have also been successfully used to measure subjective norms in TPB frameworks by scholars in various contexts, such as health behaviors (Armitage & Conner, 2001; White et al., 2008), technology adoption (Teo, 2010), and others (Jones & Robinson, 2017; Manning, 2009). By drawing on these empirical findings and the theoretical foundations of the TPB, this study

aimed to contribute to the broader understanding of the role of parental debt norms, a specific type of subjective norm, in shaping young adults' debt delinquency behaviors, despite the challenges posed by the secondary dataset.

Perceived Behavioral Control (Perceived Financial Control)

PBC was central within the TPB framework by highlighting the perceived ease or difficulty associated with performing a specific behavior (Ajzen, 1991). PBC is considered a significant predictor of actual behavior because it directly reflects an individual's perceived ability to perform a behavior, considering external constraints and internal factors that may influence behavior execution. Perceived financial control consists of two components: perceived financial controllability and perceived self-efficacy. Perceived financial controllability refers to an individual's perception of external constraints or facilitating factors that may affect their ability to control their finances. Xiao et al. (2011) measured financial controllability using a single item asking respondents how easy or difficult it was to stick to their plans when actually managing their money. This measure captures the external aspect of perceived financial control, focusing on the perceived ability to adhere to financial plans amidst constraints.

Perceived self-efficacy, on the other hand, relates to an individual's confidence in their ability to manage their finances effectively. Xiao et al. (2011) measured financial self-efficacy using a single item to ascertain how confident the respondents were in their ability to manage their own finances. This measure reflects the internal aspect of perceived financial control, emphasizing personal beliefs about financial management capabilities. Both internal factors, such as self-efficacy and perceived control, and external factors, such as social norms and environmental constraints, influence PBC. This suggests a complex interaction between these internal and external factors, emphasizing that a combination of personal beliefs and external

circumstances determines an individual's control over behavior and intentions (Kidwell & Jewell, 2003).

It is crucial to clarify the conceptual distinction between PBC as a predictor and actual behavior as an outcome within the TPB framework. While PBC influences behavior through the mediation of intentions, it can also directly influence behavior in specific contexts, particularly in the field of financial decision-making (Ajzen, 1991; East, 1993; Zimmerman et al., 2015). For example, in the scenario of debt repayment, PBC can directly influence repayment behavior without the need for intermediary intentions. An individual with limited funds may postpone bill payments due to perceived financial constraints despite a desire to settle debts promptly. This low PBC, based on the awareness of financial limitations, directly leads to delayed payments based on immediate financial ability.

Empirical studies have demonstrated the predictive power of PBC using various measurement techniques, including psychological and financial-related constructs. These measures often focus on capturing individuals' perceptions of their ability to perform specific behaviors rather than their actual behaviors (Ajzen et al., 1995; Sparks et al., 1997). Researchers have employed a range of approaches to operationalize PBC, such as using internal factors (self-efficacy), external factors, or a combination of both (Chudry et al., 2011; East, 1993; Magwegwe & Lim, 2021; Rutherford & DeVaney, 2009; She et al., 2024; Shi et al., 2022; Xiao et al., 2011).

For instance, She et al. (2024) developed three internal (self-efficacy) items to measure PBC in examining retirement planning behaviors, while Shi et al. (2022) adapted Rotter's (1966) scale, using locus of control as a proxy to measure participants' beliefs about their ability to manage their personal finances. Other scholars have used the Pearlin Mastery Scale (Pearlin et

al., 1981) as a proxy to measure self-efficacy (Kuhnen & Melzer, 2018; Tang, 2017; Zimmerman et al., 2015).

In terms of external factors, Chudry et al. (2011) measured respondents' knowledge of finance as an indirect measure of PBC and the ability to control debt as a direct measure and found that the ability, rather than knowledge, was a more significant predictor of borrowing intentions. Rutherford and DeVaney (2009) selected questions based on assessing resources and opportunities, measuring five items such as the source of financial credit knowledge, level of shopping for credit, past payment behavior, level of education, and household income. Magwegwe and Lim (2021) focused on subjective financial knowledge and financial management ability as measures of PBC in their study.

Several studies have also used a combination of internal and external factors to measure PBC. Xiao et al. (2011) utilized financial self-efficacy and controllability as proxies for PBC, measuring self-efficacy using a single item assessing respondents' confidence in managing their finances and control using an item asking about the ease or difficulty of sticking to financial plans. Koropp et al. (2014) assessed PBC by measuring decision-makers' perceptions of control over financial source utilization, aligning with Ajzen's concept of PBC as reflecting the ease or difficulty of behavior performance based on anticipated barriers and past experiences.

Notably, frequency-based measures have been widely used in several studies to assess perceived behavior, as they are believed to capture the perceived frequency of difficulties rather than the actual level of difficulty experienced (Ajzen & Fishbein, 1977; Balakrishnan & Ertan, 2018; Grable et al., 2009; Namasivayam, 2004; Ouellette & Wood, 1998; Peetz et al., 2021; Perugini et al., 2010; Rutherford & DeVaney, 2009; Sheeran & Orbell, 1999a, 1999b; Sparks et al., 1997; Zolait, 2014). The validity of using frequency measures as reflective of PBC is

supported by several review studies. Blair and Burton (1987) and Burton and Blair (1991) highlighted that frequency measures in survey questions were commonly used in behavior prediction and that different cognitive processes, task conditions, and respondent characteristics interacted to influence response accuracy.

Ouellette and Wood (1998) suggested that perceived control was consistent with frequency, where the frequency of past behaviors was associated with habit strength, which in turn had a direct effect on future performance. Similarly, Ajzen et al. (1995) underscored the significance of salience, determined by frequency measures, in comprehending the strength and accessibility of beliefs and found that the frequency of elicitation in their pilot study was linked to the accessibility of beliefs. Ajzen and Fishbein (1977) posited that asking individuals about the frequency or likelihood of their intentions to perform a behavior could provide valuable insights into their readiness to act, serving as proxies for predicting future behavior.

Empirical studies provide further evidence for the link between the frequency of past behaviors and habit strength, which can be interpreted as an indicator of perceived control and directly influences future performance. McAuley (1992) used path analysis and found that behavioral indicators of frequency and intensity of exercise predicted exercise behavior among middle-aged adults. Moore and Ohtsuka (1999) found that perceived behavioral control, as measured by gambling frequency, was positively associated with both intention to gamble and actual gambling behavior. Balakrishnan and Ertan (2018) found that the effect of higher frequency reporting was associated with improved bankers' loan portfolio effects, suggesting that quarterly reporting reduced banks' risk-taking.

In a study examining the adoption of Internet banking (IB) services, Zolait (2014) measured PBC by assessing individuals' perceptions of the ease or difficulty they encountered in

engaging with IB services. The study found that individuals who frequently experienced challenges or difficulties in adopting IB services had lower perceived control over their behavior in using these services. Peetz et al. (2021) defined perceived control as individuals' subjective belief in their ability to influence outcomes related to income volatility, measuring it using participants' ratings of the control they felt they had over changes in their income on a scale from 1 to 5. Namasivayam (2004) used frequency measures to operationalize perceived control in a study on how consumers' perceptions of control interacted with service provider behaviors to influence consumer satisfaction levels.

Grable et al. (2009) measured perceived behavioral control using a 7-item version of the Rotter (1975) Locus of Control Scale, with participants responding to items on a scale ranging from "almost never" to "almost always." The study found that consumers' propensity to save, budget, and control spending depended on their level of perceived control over outcomes, as well as knowledge and financial resources. Sheeran and Orbell (1999a, 1999b) used frequency-based measures to predict perceived behaviors related to playing the lottery and taking vitamin pills, respectively. The study found high reliability and predictive power for these measures.

Rutherford and DeVaney (2009) measured perceived behavioral control of credit card usage using five items, including past payment behavior, which was operationalized based on the timeliness and consistency of households' previous credit card payment practices. The study found a significant correlation between PBC and credit card usage. While critics may argue that frequency measures oversimplify the complex dynamics of financial behaviors, Armitage and Conner (2001) provided meta-analytic support for the predictive validity of these measures, suggesting that they were not only practical but also robust across various domains, including financial behaviors.

In sum, the use of frequency-based measures to assess perceived financial control was supported by the extensive literature discussed above, which highlighted the validity of such measures in capturing the perceived frequency of difficulties and their association with habit strength and future performance (Ajzen & Fishbein, 1977; Balakrishnan & Ertan, 2018; Grable et al., 2009; Namasivayam, 2004; Peetz et al., 2021; Rutherford & DeVaney, 2009; Sheeran & Orbell, 1999a, 1999b; Zolait, 2014). By focusing on the frequency of financial difficulties and the perceived ability to manage finances, these measures aligned with the conceptual foundations of PBC within the TPB framework, capturing both the internal and external factors that shaped an individual's perceived control over their financial situation.

In conclusion, the extensive literature on PBC and its measurement in the context of financial behavior supported the use of a variety of approaches. Building on these findings, this dissertation adopted a measurement strategy that included three items for perceived financial control, reflecting specific financial-related items such as difficulties in bill payments, delays in purchasing necessities due to insufficient funds, and savings. This approach was built on the work of Xiao et al. (2011), who found that these components directly reflected individuals' beliefs in their actions to manage and overcome financial challenges. Perceived financial control addressed the external aspects of financial management, such as navigating economic constraints in spending or borrowing, which were essential components of PBC, according to the TPB framework (Ajzen, 1991). Furthermore, the use of specific perceived financial control items from the NSLCYA dataset ensured the relevance and applicability of the findings to the target population of young adults and contributed to the overall objectives of understanding and addressing financial delinquency in this age group.

The TPB provides a robust framework for understanding financial debt delinquency behaviors through its three key components: risky attitudes, parental debt norms, and perceived financial control. However, to fully comprehend these behaviors among young adults, it is crucial to consider the broader context of parental dynamics and socioeconomic status that shape these components. This study extended beyond examining the direct effects of TPB components on financial behaviors. It also explored how these factors mediated the influence of parent-child relationship and parental socioeconomic status on young adults' financial practices. By doing so, this study aimed to provide a more comprehensive understanding of the complex interplay between individual perceptions, familial influences, and socioeconomic factors in shaping financial outcomes. The following section introduces FFST as another guiding framework for understanding how parental influences contributed to the development of attitudes, social norms, perceived financial control, and behavioral outcomes from childhood to adulthood to further understand financial debt delinquency behaviors among young adults.

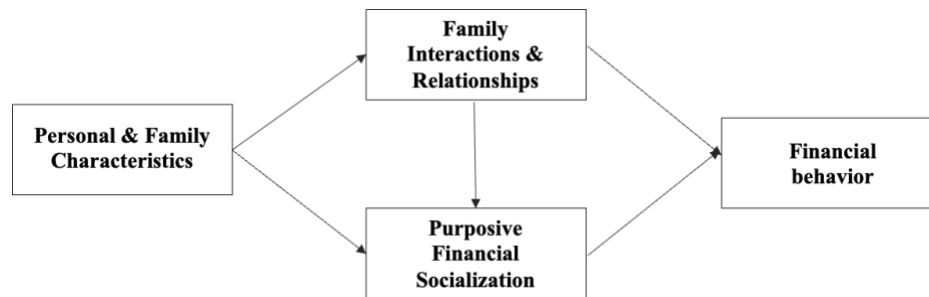
Socialization Factors (Family Financial Socialization Theory)

Parent-Child Relationship

Research underscored the role of family dynamics, particularly the quality of parent-child relationships, as indicators of responsible financial behavior in young adults (Gudmunson & Danes, 2011; John, 1999; Kim & Chatterjee, 2013; Lanz et al., 2020; Tang, 2017; Webley & Nyhus, 2006). FFST provided a robust framework for understanding how these relationships and interactions within families influence financial behaviors from childhood through adulthood (Gudmunson & Danes, 2011). This theory posited that financial socialization occurs not only through explicit financial instruction but also by implicit learning derived from parental modeling and the overall familial socio-economic environment (see Figure 3).

Figure 2.

Family Socialization Process and Financial Behavior Outcome



Adapted from “Family financial socialization Theory (Gudmunson & Danes, 2011).

Positive financial socialization experiences, such as family interactions and adept financial parenting, have been empirically linked to favorable financial behaviors, including effective budgeting, savings, cash and credit management, and debt handling (Allsop et al., 2021; Deenath et al., 2019; Flouri, 2004; Gutter & Copur, 2011; Jorgenson et al., 2017; Otto, 2013; Sabri et al., 2020; Xiao et al., 2011; Xiao et al., 2014). These behaviors are crucial for developing financial independence and overall sound financial management in young adults, highlighting the importance of nurturing parental dynamics for fostering positive outcomes and mitigating negative financial behaviors. For instance, Shim et al. (2010) found parental influence to have a larger role in their children’s credit card use and attitudes than in their work experience and previous education combined. In another study, Allsop et al. (2021) found that the quality of the parent-child relationship and parental monitoring practices, such as knowing their child’s spending habits, influenced how well children were prepared financially for adulthood.

Furthermore, the quality of the family relationship, defined as the perceived parent-child closeness, has been found to be associated with both purposive financial socialization and financial outcomes, even if parental interactions are not financial in nature (Gudmunson & Danes, 2011; Kim & Torquiant, 2020; Lanz et al., 2019; LeBaron & Kelley, 2021; Zhao &

Zhang, 2020). Studies have demonstrated closer parent-child relationships mediating financial attitudes and responsible money management of young adults (Allsop et al., 2021; Kim & Torquaint, 2019; Shim et al., 2010; Tang, 2017). For instance, scholars have found parents to be the most influential socialization agent regarding credit card knowledge for students (Norvilitis & MacLean, 2010; Palmer et al., 2001; Shim et al., 2010). Research has shown that even parents who have filed for bankruptcy during their child's adolescent years could positively influence the financial behavior of their young adults and reduce the likelihood of their children repeating similar financial mistakes, provided they engaged actively in their children's socialization during earlier childhood years (Agarwal et al., 2024). These studies showed that closer parent-child relationships imply more conservative financial behaviors and better debt repayment practices. In other words, the parent-child relationship promoted stronger perceived financial control.

In exploring the dynamics of parent-child relationships, several scholars have effectively operationalized the concept of closeness, providing a foundation for similar measures in current research. Closeness in child development literature has often been characterized by the affective nature of the parent-child relationship and is referred to as the connection of thoughts, feelings, and behaviors between two people (Amato, 1987; Bornstein, 2016; Cabrera et al., 2007). Many studies have operationalized closeness by asking a question assessing how close the child feels towards their mother/mother figure and father/father figure based on a Likert scale ranging from 1 (extremely close) to 4 (not very close) (King et al., 2018; MacNeill et al., 2023; Schoppe-Sullivan et al., 2013). This measurement is also similarly used in the field of financial planning.

Kim and Torquati (2020) examined the relationship between closeness with parents and money management behaviors using a single question: "How close do you feel to your father and mother, including biological parent/stepparent/adoptive parent/other parental figure?" Their

findings indicated that a positive parent-child relationship with both mothers and fathers significantly enhanced young adults' financial behaviors by influencing their sense of responsibility. This closeness was intricately linked to the level of responsibility young adults felt, which subsequently impacted their money management practices and financial concerns. Similarly, Tang (2017) measured the closeness in parent-child relationships within the framework of the National Longitudinal Survey of Youth 1979 and its Child and Young Adult survey by creating a composite "parent-child relationship" score based on children's ratings of their closeness to their parents and parental awareness of the children's whereabouts. This measurement included two specific criteria: (1) closeness to their parents and (2) how often their parents knew whom they were with when not at home. The study found that closer parent-child relationships significantly enhanced the impact of parental financial behaviors on adolescents' own financial behavior and self-control skills. In Tang's study, the parent-child relationship was defined as the child's perception of closeness towards the biological mother, biological father, stepfather, or father figure.

Parental Socioeconomic Status

Parental socioeconomic status, encompassing education and financial resources, also plays an important role in providing and guiding their children. High parental socioeconomic status often implies that parents have the means to provide substantial financial support for their children's education, housing, and other essential expenses, thereby reducing their reliance on debt (Jorgensen & Savla, 2010; LeBaron et al., 2018; Padilla-Walker et al., 2012; Rauscher, 2016). Consequently, this financial security may encourage adolescents to develop risk-taking attitudes, which can be beneficial in managing debt responsibly in young adulthood.

Studies suggest that higher parental income and education levels are positively associated with risky attitudes among adolescents as these adolescents feel more secure in their financial future and thus more confident in taking calculated risks (Kim et al., 2012; Houle, 2014; Xiao et al., 2014). This risk-taking attitude, fostered by a secure financial background, can lead to lower levels of debt delinquency behaviors, as these individuals are more likely to make informed and strategic financial decisions (Allen et al., 2007; Livingstone & Lunt, 1992).

Conversely, individuals from lower income families often adopt risk-averse behaviors and face higher hardships related to education and living expenses, which can lead to higher debt accumulation ((Friedline & West, 2016; Houle, 2014; Jackson & Reynolds, 2013; Xiao et al., 2011). For instance, Kim et al. (2012) found that lower asset levels in households were correlated with increased credit card and student loan debt among 18–25 year old, highlighting the financial risks associated with lower parental assets. Similarly, Houle (2014) reported a negative correlation between parental income/net worth and unsecured debt among young adults, emphasizing the protective effect of higher parental SES against debt accumulation.

Despite these findings, some studies have shown that financial behaviors, such as debt accumulation, may develop regardless of socioeconomic background, indicating that individual attitudes and perceived financial control might sometimes override the foundation effects of parental socioeconomic status (Allen et al., 2007; Flouri, 2004; Hancock et al., 2013; Seriod et al., 2010). Livingstone and Lunt (1992) found sociodemographic factors to be minimally significant predictors in personal debt and debt repayment compared to attitudinal factors and financial control behaviors.

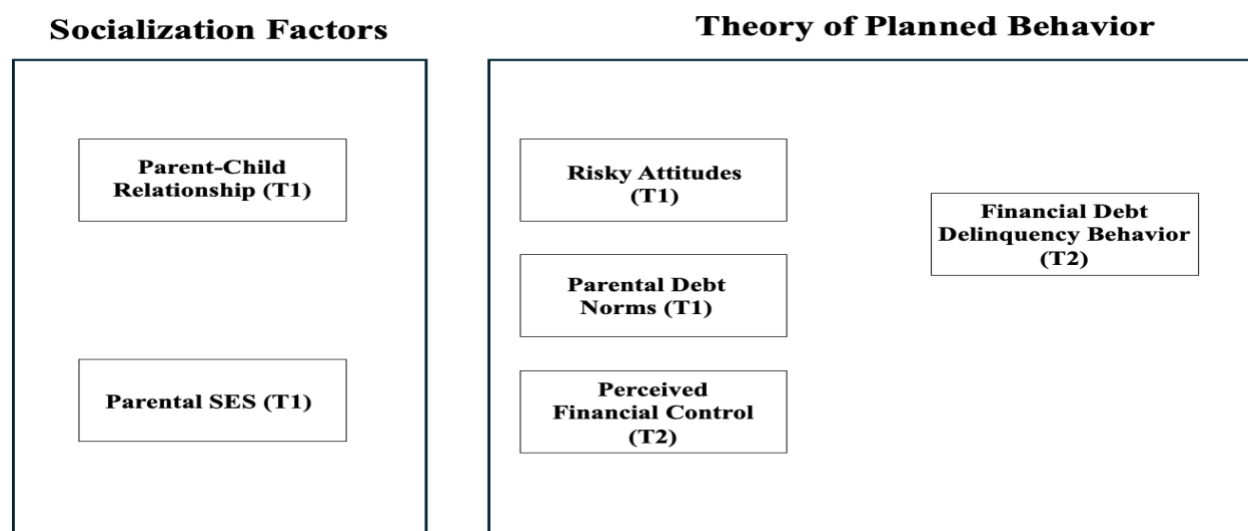
Various methodologies have also been used to assess parental SES in research studies, including direct measures of parental income and education (Xiao et al., 2014) and more

complex indices such as the Computerized Status Index (CSI) for educational levels and household income (Shim et al., 2010). Dwyer et al. (2011) categorized families based on income levels, observing class-based disparities in debt levels among young adults, underscoring the influence of socioeconomic background on financial insecurity.

Based on the previous discussions of TPB and socialization factors/FFST, Figure 4 provides a visual representation of the theoretical and conceptual relationships that were covered in the literature review.

Figure 3.

Theoretical and Conceptual Model



Note: T1 is when the child is an adolescent (age 10–14) in 2004 and T2 is when the child is a young adult (age 18–25) in 2012.

Covariates

Socioeconomic and demographic factors also contribute to financial debt delinquency behaviors (Almenbet et al., 2021; Drentea & Lavrakas, 2000; Leandro & Botelho, 2022; Schmitt et al., 2020; Rutherford & DeVaney, 2009; Tang, 2017; Xiao et al., 2011). Key covariates

affecting these outcomes included age, gender, race/ethnicity, as well as financial knowledge, attitudes, and behaviors.

Age has been consistently associated with debt levels and financial behaviors, with older young adults generally incurring higher debt levels, particularly in student loans (Houle, 2014; Kim et al., 2012). This may be due to the accumulation of debt over time as young adults progress through college and enter the workforce. In addition, older young adults may have more access to credit and may be more likely to take on debt for major purchases such as homes and vehicles (Jiang & Dunn, 2013).

Gender differences in debt and financial behaviors have also been observed in the literature. Several studies have found that young women tend to have higher levels of credit card debt and are more likely to engage in risky credit card behaviors compared to young men (Lyons, 2004; Kim et al., 2012; Robb & Sharpe, 2009). This gender gap may be attributed to differences in financial knowledge, attitudes toward debt, and socialization experiences (Lyons, 2004; Robb & Sharpe, 2009).

Race and ethnicity have also been associated with debt outcomes among young adults. Studies have found that Black and Hispanic young adults tend to have higher levels of student loan debt and are more likely to experience difficulty repaying their loans compared to their White counterparts (Houle, 2014; Jackson & Reynolds, 2013; Grinstein-Weiss et al., 2016; Kim et al., 2022). These disparities may be linked to differences in parental resources, access to financial aid, and labor market outcomes (Houle, 2014; Grinstein-Weiss et al., 2016).

Employment status has also been shown to be associated with income stability and capacity to manage debt (Dwyer et al., 2011; Getter, 2003). Employment affects the individual's ability to manage debt and avoid delinquency; in other words, unemployed individuals are more

susceptible to financial difficulties, resulting in higher rates of debt delinquency. A study by LeBaron et al. (2019) found a significant relationship between employment status and financial behaviors, with full-time employed individuals exhibiting more stable financial practices and lower delinquency rates compared to their unemployed counterparts.

Marital status is another variable that plays a role in financial debt delinquency (Addo, 2014; Dew, 2007; Getter, 2003; Xiao & Yao, 2020). Married individuals often have dual incomes and shared financial responsibilities, which can lead to better debt management compared to single individuals (Getter, 2003). A study by Dew (2007) indicated that married couples tended to have lower levels of consumer debt and were less likely to experience delinquency, attributing this to shared financial goals and joint management of household finances. Conversely, single individuals, particularly single parents, face higher risks of financial strain and delinquency due to sole responsibility for household expenses and childcare costs (Getter, 2003).

Household income has also been shown to be a key predictor in determining debt delinquency behaviors. Studies have demonstrated a strong association between household income levels and financial debt delinquency, indicating that higher household income is often linked to lower rates of delinquency (Drentea & Lavrakas, 2000; Hovee et al., 2014; Hovee et al., 2016; Xiao et al., 2011). This relationship suggested that households with greater financial resources had better means to manage debt and avoid delinquency.

The presence of household dependents, such as children or elderly family members, significantly predicts higher debt levels and an increased risk of debt delinquency. According to Kowalski et al. (2023), having children correlates with a higher likelihood of falling into excessive debt. Research also demonstrates that families with more dependents encounter

elevated financial demands, resulting in greater financial obligations that can strain their budgets and exacerbate debt management challenges (Kim et al., 2017; Kowalski et al., 2023; Xiao & Yao, 2020). These households typically face additional costs related to education, healthcare, and basic needs, which not only increase their reliance on debt but also hinder their ability to maintain regular debt payments (Drentea & Lavrakas, 2000; Kim et al., 2019). The economic pressures of supporting dependents limit the ability to accumulate savings, making these households more vulnerable to financial instability and more likely to fall behind on debt payments (Tach & Greene, 2014; Xiao et al., 2011).

Finally, individual financial behaviors, such as budgeting, saving, and credit management, have also been linked to debt outcomes among young adults. Those who engage in responsible financial behaviors are less likely to experience debt delinquency and financial stress (Xiao et al., 2014; Friedline & West, 2016). Conversely, impulsive spending and heavy reliance on credit increase the risk of debt problems (Robb & Sharpe, 2009; Jiang & Dunn, 2013). Having an emergency savings fund plays a vital role in promoting financial stability and reducing the risk of debt delinquency among households. Robust evidence supports the importance of having an emergency savings as a key predictor of lower debt repayment or debt delinquency behaviors (Despard et al., 2020; Friedline & West, 2016; Halpern-Meekin et al., 2018; Lee & Yang, 2008). Emergency savings act as a financial buffer that mitigates the risk of economic hardship, reducing the likelihood of debt delinquency (Gjertson, 2016). Households with emergency funds experience fewer financial hardships, even during unforeseen economic downturns, while those without such arrangements often resort to high-cost borrowing options or missing debt payments (Collins & Gjertson, 2013; Dunn, 2001; Gjertson, 2016; Lee & Hanna, 2022).

Summary

This study examined the relationship between the various factors that contribute to financial debt delinquency among young adults using the frameworks of the TPB and FFST to extend beyond traditional financial theories. The review of literature highlighted the comprehensive nature of financial debt delinquency, pointing out the limitations of economic models to fully encompass the socio-psychological factors impacting financial behaviors. By merging insights from TPB and FFST, this research examined the relationship between attitudes, social norms, perceived behavioral control, and parental influences, thereby deepening the understanding of the financial socialization process.

This study also identified gaps in the existing literature, particularly the lack of empirical studies on the direct and indirect effects of socialization factors such as the parent-child relationship and parental socioeconomic status on young adult's financial attitudes, norms, and behaviors. By addressing these gaps, this study enriched the discussion on intergenerational influences and their effects on young adults' financial delinquency behaviors, contributing to both the theoretical and empirical understanding of the field. Through an analysis of TPB and FFST, this study introduced a comprehensive conceptual framework for understanding the mechanisms of financial socialization. This framework was essential for developing targeted interventions that aimed to reduce adverse financial behaviors and promote responsible financial management among young adults.

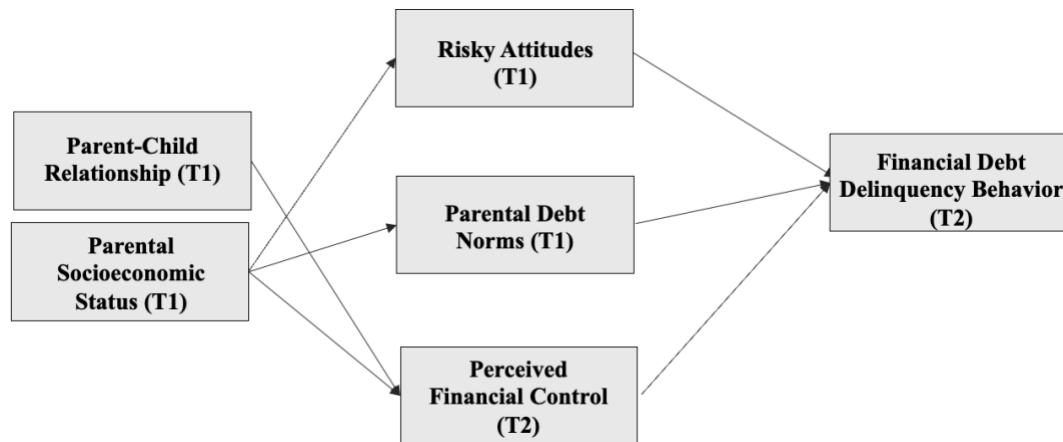
Chapter 3 - Method

This study aimed to investigate the pathways between parental influences, individual attitudes, social norms, and perceived financial control in shaping young adults' financial debt delinquency behavior. Previous chapters provided the outline and the empirical support of the theoretical frameworks utilized, including the theory of planned behavior TPB and family financial socialization theory (FFST). Using data from the National Longitudinal Survey of Youth 1979 and Child and Young Adult cohorts, the merged NLSY79 and NSLCYA datasets enabled a longitudinal analysis of financial perspectives, parent-child dynamics, risky attitudes, parental debt norms, and debt delinquency behavior outcomes across generations. The subsequent sections detail the methodology and statistical approach, focusing on longitudinal analysis to address the research question outlined in Chapter 1. This study was guided by the following research question:

How do intergenerational factors, such as parent-child relationship and parental socioeconomic status, influence financial debt delinquency behaviors in young adulthood, and to what extent are these relationships mediated by individual risky attitude, parental debt norms, and perceived behavioral control?

Figure 4.

Visual Representation of the Conceptual Model



Note: A visual outline of the conceptual model for the directional relationships between composite variables, categorical variables, and financial debt delinquent behavioral outcomes.

Hypotheses

Prior research has demonstrated the influential roles of individual attitudes, subjective norms, and perceived behavioral control on actual behaviors in the TPB framework (Azjen, 1991). Empirical studies have shown that these TPB components are associated with financial behaviors (Magwegwe & Lim, 2021; Russell et al., 2021; Rutherford & DeVaney, 2003; Shim et al., 2009; Xiao & Wu, 2008; Xiao et al., 2011; Zimmerman et al., 2013). The FFST also highlighted the pivotal role of parental socioeconomic status and relationship quality as key in promoting adolescent financial attitudes, knowledge, capabilities, and behaviors with enduring impact throughout later adulthood (Allsop et al., 2021; Gudmunson & Danes, 2011; LeBaron et al., 2021; LeBaron et al., 2019; Serido et al., 2020). Integrating these findings, this study tested hypothesized sequential relationships linking positive parental socialization, adolescent dispositions, and debt repayment delinquencies, using robust longitudinal data spanning these

developmental life stages. Based on the theoretical frameworks of TPB and FFST, the following hypotheses were developed, and seven relationships were tested. Figure 3.2 illustrates the path model.

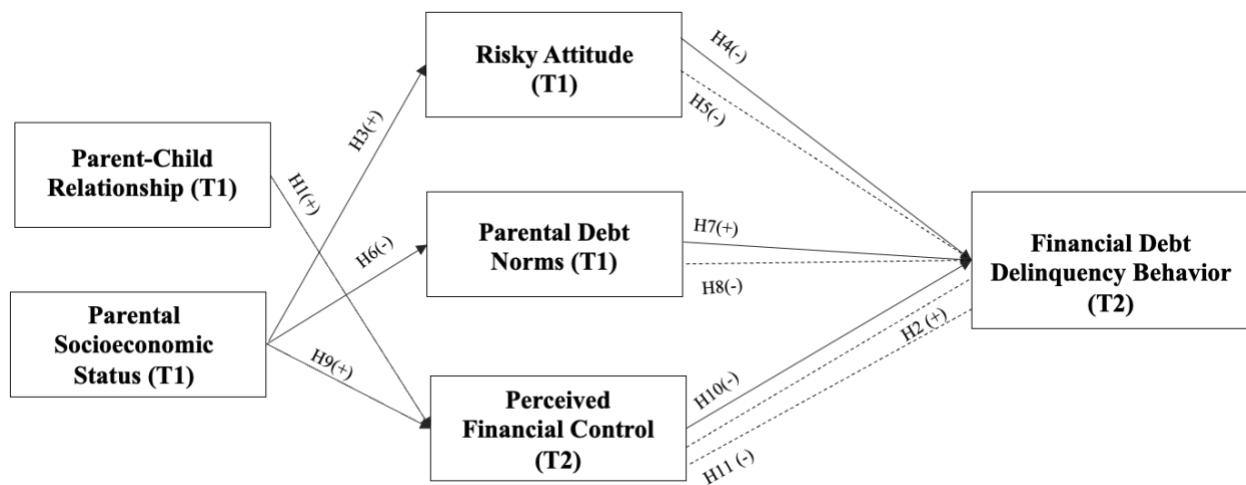
Hypotheses:

- H1:* There is a positive relationship between the parent-child relationship during adolescence and perceived financial control in young adulthood.
- H2:* Perceived financial control mediates the relationship between the parent-child relationship during adolescence and financial debt delinquency behaviors in young adulthood.
- H3:* Parental socioeconomic status during adolescence has a positive relationship with risky attitude during adolescence.
- H4:* Risky attitude has a negative relationship with financial debt delinquency Behaviors in young adulthood.
- H5:* Risky attitude mediates the relationship between parental socioeconomic status during adolescence and financial debt delinquency behaviors in young adulthood.
- H6:* Parental socioeconomic status during adolescence has a negative relationship with parental debt norms during adolescence.
- H7:* Parental debt norms during adolescence have a positive relationship with financial debt delinquency behaviors in young adulthood.
- H8:* Parental debt norms mediate the relationship between parental socioeconomic status during adolescence and financial debt delinquency behaviors in young adulthood.

- H9:* Parental socioeconomic status during adolescence has a positive relationship with perceived financial control in young adulthood.
- H10:* Perceived financial control in young adulthood has a negative relationship with financial debt delinquency behaviors in young adulthood.
- H11:* Perceived financial control mediates the relationship between parental socioeconomic status during adolescence and financial debt delinquency behaviors in young adulthood.

Figure 5.

The Path Model



Notes: Solid lines represent direct effects between variables (H1, H3, H4, H6, H7, H9, H10). Dotted lines indicate mediation effects where the influence of one variable on another is mediated by a third variable (H2, H5, H8, H11).

Dataset

This study utilized data from the National Longitudinal Survey of Youth 1979 (NLSY79) and the NLSY79 Child and Young Adult Survey (NLSCYA), two longitudinal surveys conducted by the U.S. Bureau of Labor Statistics, originally sampled to monitor experiences and perspectives of youth and families over time. The NLSY79 originally surveyed over 12,686

Americans aged 14–22 years old beginning in 1979, following this cohort over time through age 50 and older. This longitudinal dataset tracked critical details, including demographics, family background, education, employment details, income sources, geographic locations, and, most relevant to this analysis—financial attitudes and behaviors measured within households across decades. By compiling extensive data on socioeconomic experiences, the NLSY79 enabled a closer examination of the multitude of experiences influencing long-term financial trajectories. Specific variables spanned family structure, child-parent relationships, job status, income, financial perspectives, debt issues, and an array of other dimensions that can examine factors shaping financial attitudes and issues within and across generations. These variables collected over the life course offered this study the opportunity to empirically assess determinants underlying financial behaviors and their evolution across age groups and familial ties.

To expand on the intergenerational analysis, the NLSCYA was launched in 1986 to longitudinally survey over 95% of children born to the original NLSY79 female cohort. This representative sample mirrored the biological mothers to enable cross-generational examinations. Following this youth cohort biennially, the NLSCYA compiled comparable perspectives on financial outlooks, economic variables, family dynamics, and developmental viewpoints across ages. Spanning over 3 decades from 1986–2018, the NLSCYA contains 13 waves of young adult data and 17 waves of child data. Integral to this study are assessments of the multidimensional qualities of parent-child relationships, parental norms related to financial debt, debt repayment behaviors, and related facets associated with financial trajectories and issues. By integrating parental contexts with children’s evolving developmental perspectives, the NLSCYA facilitated the analysis of contributors to financial attitudes and behaviors within families over time.

Connecting these intergenerational datasets allowed for an empirical examination of how maternal modeling context and adolescent developmental perspectives shaped the evolution of financial behaviors, attitudes, and parent-child relationship qualities influencing financial trajectories over time. The extensive longitudinal scope captures financial socialization processes and outcomes from adolescence through adulthood, enabling the analysis of hypothesized pathways linking family environments and individual developmental factors to long-term financial issues. By integrating the maternal context available in the NLSY79 with youth viewpoints in the NLSCYA, these datasets presented the valuable potential to test cross-generational determinants underlying financial delinquency.

Sampling Procedure

Guided by Tang's (2017) research, this study merged the NLSY79 and NLSCYA datasets, followed by connecting children's information to maternal data to create an intergenerational pairing. The sampling criteria included the age of the child and the availability of relevant data. Children aged 18–25 were surveyed in 2012 to ensure that they had reached young adulthood when financial behaviors and outcomes questions were asked (totaling 2,659 from the merged intergenerational dataset). In addition, in 2004, the children were still adolescents (aged 10–17) when child-parent relationship and parental financial behaviors were observed. After applying these age-related criteria and merging the children's data with their mothers' household information, the final sample totaled 2,659 respondents, representing 1,178 unique household clusters of distinct mothers. Young adults aged 18–25 are particularly vulnerable to financial delinquency due to significant life transitions such as moving into independent living, enrolling in higher education, and acquiring different forms of credit (Shim et al., 2009; Shim et al., 2015; Tang and Peter, 2021). This period is marked by increased

financial responsibilities, necessitating the development of sound financial behaviors to mitigate the risks associated with debt delinquency (Letkiewicz & Heckman, 2010; Xiao et al., 2014). The longitudinal design in this study enabled the analysis of adolescent viewpoints preceding adult financial behaviors. The resulting sample provides adequate statistical power for testing the complex path analysis models among the key predictors of interest to this analysis—the intergenerational transmission of attitudes, social norms, and perceived financial control, and the role of the parent-child relationship and parental socioeconomic status in shaping financial outcomes.

Variables and Measurement

Dependent Variables

Young Adults' Debt Delinquency Behavior

The dependent variable, the Financial Debt Delinquency Behavior Index, was conceptualized as a composite variable constructed from 10 binary survey questions from the 2012 NLSCYA. These questions reflected a range of financial delinquency scenarios encountered by the young adult respondent or their spouse/partner in the past year. Specifically, respondents were asked if they, or their spouse/partner, (1) had an account sent to a collection agency, (2) had anything repossessed, (3) had experienced property foreclosure, (4) had filed for bankruptcy, or have been over 60 days late on payments for (5) had mortgage/rent, (6) had utility bills, (7) had credit card payment, (8) had car payment, (9) had other loans, and (10) had other bills. The financial delinquency behaviors were defined as 1 if the respondent, their spouse, or their partner answered 'yes' and 0 otherwise, with the total score ranging from 0 to 10, where higher scores indicated a greater incidence of financial delinquency behaviors.

While acknowledging that the severity and financial impact of different types of delinquencies can vary significantly, this study attributed an equal weight to each financial delinquent behavior. This decision was informed by this study's exploratory aim to understand the broader patterns and underlying causes of financial delinquency behaviors among young adults rather than the severity of individual delinquencies. Similar approaches have been used in other studies to measure individual's financial delinquency behaviors or poor debt management behaviors (Kuhnen & Melzer, 2017; Tang, 2017) and to construct additive scales for financial planning practices (Robb & Woodyard, 2011) and financial capability indexes (Xiao & Kim, 2022). This methodology allowed for a nuanced understanding of financial delinquency behaviors by aggregating key indicators into a singular metric, thus enabling the exploration of young adults' propensity towards financial delinquency behaviors.

Key Independent Variables

Parent-Child Relationship

Parent-child relationship referred to the close relationship between the adolescent and their mother, spouse, or partner using three Likert scale questions from the 2004 NLSCYA wave. While the dataset was derived from the biological mother-child dyads, these measures captured a broader range of parental figures in the adolescent's life. This approach was aligned with methodologies used in prior studies (Henager et al., 2015; Kim & Torquaint, 2019; Tang, 2017) to capture the adolescent's viewpoint on parental closeness. The questions included three items evaluating the adolescent's perceived closeness to their mother, biological father, stepfather, or father figure (rated from 1 = "extremely close" to 4 = "not very close"). A composite score was generated by summing the responses to the three items and calculating the average score. Higher composite scores across these questions denoted a closer parent-child relationship.

Parental Socioeconomic Status

Parental socioeconomic status in this study was operationalized by summing household income to create a continuous variable, which was then log-transformed to address skewness in its distribution, a methodology akin to Dwyer et al. (2011). A right-skewness was anticipated as the dataset oversampled lower-income and minority households. However, for interpretative clarity and to convey a representative measure of central tendency, the geometric mean of household income, calculated by exponentiating the mean of the log-transformed income values, was reported in the descriptive statistics as the adjusted average income was more indicative of the typical household within the skewed sample.

Risky Attitude

Risky attitude was measured using a single item from the NSLCYA dataset, assessed on a 4-point Likert scale with responses ranging from 1 (“strongly disagree”) to 4 (“strongly agree”). The self-assessment item, “*I enjoy taking risks,*” captures adolescents’ self-reported propensity for risky attitude. This methodological approach, grounded in the work of Tang (2017) and Henager et al. (2013), provides a clear and concise measure of risky attitude. This item was chosen to define general risk taking attitude due to its direct relevance to the construct and its demonstrated utility in prior research (Epstein & Botvin, 2012; Bran & Vaidis, 2020). The scores range from 1 to 4, with higher scores indicating a greater inclination toward exhibiting a risky attitude. This measure allows for the assessment of risky attitude’s potential role in predisposing individuals to financial debt delinquency behaviors as they transition into young adulthood.

Parental Debt Norms

Following the methodologies utilized by Perry and Morris (2005) and Tang (2017), a composite score was constructed to encapsulate key aspects of parental debt norms toward financial debt behaviors. This included questions in the NLSY79 survey about the incidents of missing payments or significant payment delays in the past five years, the number of credit cards owed the maximum amount, net positive or negative financial position, and a history of bankruptcy declarations. Key among these indicators was a continuous measure of the number of credit cards with outstanding balances at their maximum limits, ranging from 0 to 13. Based on a frequency distribution analysis, this item was categorized into 0 for “none,” 1 for “one-two,” and 2 for “three or more.” In addition, respondents were also queried regarding their financial status if they were to liquidate all possessions to settle their debts, with response options including (1) having something left over, (2) breaking even, and (3) being in debt. A “net positive” variable was formulated by coding responses of “break-even” and “be in debt” as 1 to denote a non-positive financial position and 0 for “have something left over,” signifying a net neutral or better financial standing. Preliminary analysis was also conducted to explore whether the items in the variable could be operationalized as a latent construct. However, the low factor loadings and the correlations between the items suggested that a measurement model using confirmatory factor analysis (CFA) did not converge properly (Kline, 2016). Given these findings, a composite variable, rather than a latent variable, was constructed. The resulting composite score, ranging from 0 to 4, quantified the extent of negative social norms exhibited by parents, with higher scores indicating greater parental debt norms.

Perceived Behavioral Control (Measured as Perceived Financial Control)

This study operationalized perceived financial control by integrating constructs of financial controllability, drawing partially from the study conducted by Xiao et al. (2011). Three items on financial management scenarios were used to measure financial controllability. They are as follows: (1) the individual's frequency of delaying necessary purchases due to financial constraints, (2) the level of difficulty in paying bills, and (3) the individual's perception of their ability to meet financial obligations and maintain financial stability over the course of a typical month. These items are rated on a Likert scale from 1 (indicating no difficulty/never) to 4 or 5 (indicating great difficulty/all the time), capturing the tangible aspects of financial management difficulties. These items were summed up to create a composite score, with higher aggregate scores indicating greater levels of perceived financial control. This approach was supported by numerous studies, which demonstrated that frequency-based measures effectively reflected perceived difficulties and were linked to habit strength and future performance (Ajzen & Fishbein, 1977; Ouellette & Wood, 1998).

Personal Characteristics (Control Variables)

Personal characteristics, serving as covariates, played a pivotal role in shaping financial perspectives and behaviors. Drawing on the survey questions from the 2012 wave of the National Longitudinal Survey of Youth 1979 Child and Young Adult Survey (NLSCYA), the following demographic and socioeconomic factors were used as covariates in this study:

Gender: Categorized as male or female, gender has been shown to influence financial behaviors and debt delinquency rates, with some studies suggesting differing financial literacy and risk tolerance levels between them (Lusardi & Mitchell, 2008; Xiao et al., 2011). Gender was measured as a binary variable (0 = male, 1 = female).

Race/Ethnicity: Racial and ethnic backgrounds were critical in understanding disparities in financial access, education, and outcomes (Charles et al., 2009; Hanson, 2014). Race/ethnicity was measured as a categorical variable with three levels: 1 for Black, 2 = Hispanic, and 3 = non-Black/non-Hispanic.

Age: As a continuous variable, age correlated with life stage-specific financial responsibilities and decision-making patterns, affecting debt acquisition and management behaviors (Lusardi & Mitchell, 2011; Xiao & Yao, 2014).

Employment Status: Indicating whether respondents were employed (yes/no), employment status was shown to be directly linked to income stability and capacity to manage debt (Dwyer et al., 2011; Getter, 2003). Employment status was measured as a binary variable (0 = no, 1 = yes).

Education Level: Ranging from less than high school to college degree and above, has been demonstrated to be a significant predictor of financial literacy, influencing debt behavior and financial planning capabilities (Jappelli & Padula, 2013; Lusardi & Mitchell, 2011). In this study, education level was measured as a categorical variable with four levels: less than high school, high school diploma, some college, and college and above. These categories were coded as 0 for “less than HS,” 1 for “HS Diploma,” 2 for “some college,” 3 for “college.”

Marital Status: With categories including married, never married, divorced, separated, and widowed, marital status affects financial decision-making dynamics and responsibilities, impacting debt management and financial stability (Dew, 2008; Getter, 2003; Xiao & Yao, 2014). Marital status was measured as a categorical variable with five levels. These categories were coded as 0 for “married,” 1 for “never married,” 2 for “divorced,” 3 for “separated,” and 4 for “widowed.”

Number of Dependents: An initial evaluation was conducted to examine the prevalence of dependents within the sample. The inclusion of dependents as a covariate was contingent upon the frequency distribution, specifically if more than 2% of the sample reported a dependent size exceeding one individual. The variable was then considered for inclusion due to its potential association with greater financial obligations, which may influence debt repayment behaviors (Conger et al., 1994). However, given that the dataset oversampled minority households, this study also examined the number of dependents based on race to determine if certain groups exhibited a higher dependency ratio (Bowman, 2011; Charles et al., 2004). This exploration was needed to understand whether the likelihood of default was differentially influenced by family structure across racial groups. The analysis revealed that respondents with dependents were infrequent within this cohort and did not exhibit variances across different racial groups. Furthermore, logistic regression and chi-square tests confirmed no significant associations between the number of children and delinquency when controlling for race. Consequently, the decision to include the number of dependent variables was excluded as a covariate from the model to maintain parsimony.

Emergency Fund Savings: Based on the literature that associated the availability of emergency fund savings with positive financial behaviors (Despard et al., 2020; Friedline & West, 2016; Lee & Hanna, 2022; Lee & Yan, 2008; Xiao et al., 2022), the item operationalizing having an emergency fund savings was measured with a binary question to ascertain if the respondent has an emergency fund. The response was coded as 1 if the respondent answered a “yes” and 0 for a “no.”

Personal/Household Income: Given the skewness of income distributions, log transformations of income data facilitated more accurate statistical analyses, reflecting the

impact of financial resources on debt behavior (Dwyer et al., 2011). Personal/household income was measured as a continuous variable, and log transformations were applied to account for skewness.

Data Analysis Procedure

The purpose of this study was to examine the relationship between the TPB constructs (risky attitude, social norms, perceived financial control) and financial debt delinquency behaviors. Data cleaning, labeling procedures, and in-depth statistical analysis were conducted using STATA MP 18. Preliminary analyses were conducted to explore whether the items in each of the three variables (parent-child relationship, risky attitude, and perceived financial control) could be operationalized as latent constructs, but the results indicated that the factor loadings and correlations between the items were low for all three variables, suggesting that measurement models using confirmatory factor analysis (CFA) did not converge properly (Kline, 2016). Given these findings, the decision was made to use composite variables instead of treating the variables as latent constructs. Consequently, measurement models could not be employed, and path analysis was chosen as the appropriate analytical technique.

Path analysis is beneficial for examining complex relationships between variables, such as those posited between parental influences, individual attitudes, and financial behaviors in this study (Kline, 2016). It allowed for the estimation of direct and indirect effects, providing a nuanced understanding of how various factors contribute to financial debt delinquency behaviors. This analytical technique was advantageous for its ability to model multiple relationships simultaneously, offering a clearer picture of the interconnectedness of theoretical constructs. Furthermore, path analysis facilitated the evaluation of hypothesized models against empirical data, enhancing the robustness and credibility of research findings. Advancing an

understanding of pathways linking family relationships, social norms, adolescent outlooks, and eventual financial issues can inform potential interventions targeting debt management.

Missing Data

Given the secondary nature of the National Longitudinal Survey of Youth 1979 (NLSY79) and the NLSY79 Child and Young Adult Survey (NLSCYA) dataset, missing data was inevitable due to the longitudinal tracking. To ensure the integrity, a systematic approach to managing missing data was employed. The initial assessment included a thorough comparison of missingness patterns across various variables to ascertain whether missing data exhibited a systematic pattern or were indeed random, ensuring a rigorous evaluation of the randomness of missing data. After identifying the extent and pattern of missingness and assessing the randomness of missingness, the analysis determined that the primary method for handling missing data within the path analysis framework was to utilize full information maximum likelihood (FIML) for the initial analysis. FIML presented a robust option for handling missing data, especially in complex models typically associated with structural equation modeling (SEM), as it leveraged all available data points to estimate model parameters (Graham & Schaefer, 2002). FIML has been shown to produce unbiased parameter estimates and standard errors under the assumption of missing at random (MAR) (Enders, 2010; Graham, 2009). However, pairwise deletion was also considered for robustness checks, allowing for the examination of how different missing data treatments might have affected this study's findings, specifically if the direction, significance, or magnitude of the results were disproportionately impacted by the chosen method (Enders, 2010; Graham, 2009). These two options in addressing missing data were employed to maximize the validity of the results while accommodating the complexities inherent in longitudinal datasets such as the NLSCY79 and NLSCYA. If the

results from both methods were found to be consistent, it would provide further evidence for the robustness of the findings and mitigate concerns regarding the influence of missing data on this study's conclusions. The discussion surrounding results due to the method of handling missing data is reported in the subsequent chapter.

Descriptive Analysis

Descriptive analysis characterized the dataset of 2,659 young adults aged 18–25 selected from the NLSCYA. Means, percentages, and standard deviations summarized key variables like demographics, income, and financial perspectives. In general, income data also exhibited skewed distributions, so a logarithmic transformation was applied, thus reducing the influence of extreme values. In this study, preliminary analysis revealed that the income variable included zero values, and to address this issue, a very small constant (0.001) was added to each income value before transformation. This adjustment prevented computational issues associated with the logarithm of zero and allowed for the consistent application of the log transformation across the dataset, shifting the distribution to facilitate more meaningful analysis (Frost, 2023). In addition, the number of dependents as a covariate was also omitted in the analyses as respondents with dependents were less than 1% of the sample, and the low numbers created complexities in the path model analyses.

Subsequently, missing data was addressed as needed, depending on the level of incomplete responses. *Refusal and don't know responses* were found to be minimal and were therefore treated as missing completely at random (MCAR) without introducing bias (Schafer & Graham, 2002).

Path Analysis

This study employed path analysis to examine the hypothesized pathways linking parental influences, adolescent dispositions, and financial debt delinquency behaviors among young adults. Path analysis is a powerful tool for exploring direct and indirect effects among the variables of interest (Kline, 2016). As a special case of structural equation modeling (MacCallum & Austin, 2000), path analysis is particularly appropriate when there are limited multiple indicators of composite variables or when the primary interest lies in the measured variables themselves. While path analysis cannot establish causality, it allows for the estimation of direct, indirect, and total effects of the variables under consideration on the dependent variable (Streiner, 2005). In the context of this study, the dependent variable is financial debt delinquent behavior, and path analysis was employed to examine the relationships between the independent variables and this outcome.

Separate path models were used to examine the mediation effects hypothesized in each research question (1, 2, 3, and 4) independently. This approach aligned with the primary objective of testing specific pathways and gaining detailed insights into individual mediation effects. By focusing on each mediation hypothesis separately, the analysis enabled a detailed examination of how factors such as parent-child relationship quality during adolescence influenced perceived financial control and how parental socioeconomic status affected the risky attitude, social norms, and perceived financial control. Furthermore, given the substantial amount of missing values in the dataset, using a separate path model mitigated potential biases and instability that may arise in a full structural equation model (SEM) with incomplete data (Allison, 2001).

The complexity and the presence of significant missing values across key variables in the dataset necessitated the use of separate models. This approach maximized the integrity and analytical value of the available data by focusing on specific relationships and minimizing the influence of missing data (Kline, 2016). Each model isolated the distinct pathway, enhanced the clarity of the findings, and simplified interpretation by clearly delineating the influence of individual predictors on the dependent variable. In addition, bootstrapping was employed in each model to validate the indirect effects and support the mediation analyses (Kline, 2016). By using separate analytical strategies for each specific pathway, this study aimed to shed light on how familial factors, adolescent perspectives, and psychological constructs interplay to influence financial debt delinquency outcomes in young adulthood.

Model Fit

Path analysis employs several model fit statistics to assess how well the hypothesized model aligns with the observed data. The chi-square (χ^2) test evaluates the overall model fit, with a non-significant chi-square value indicating that the model cannot be rejected and fits the data well. However, the chi-square test is sensitive to sample size, and with large samples, even well-fitting models may be rejected. Therefore, additional fit indices like the Comparative Fit Index (CFI), Tucker-Lewis Index (TLI), Root Mean Square Error of Approximation (RMSEA), and Standardized Root Mean Square Residual (SRMR) are recommended (Hu & Bentler, 1999). CFI and TLI are incremental fit indices that compare the hypothesized model to a null model, with values above .95 indicating excellent fit. RMSEA and SRMR are absolute fit indices that assess the discrepancy between the observed and predicted covariances, with RMSEA values below .06 and SRMR values below .08, suggesting a good fit (Kline, 2016). These fit indices provided a comprehensive evaluation of the model's ability to reproduce the observed data and

support the plausibility of the hypothesized relationships. However, due to extensive missing values in the dataset, STATA did not report the SRMR. Despite the absence of SRMR, the combination of the other goodness of fit tests provided a robust evaluation of the model fit.

Bootstrapping

Furthermore, bootstrapping, a nonparametric resampling technique, was employed to construct accurate confidence intervals for evaluating the significance of direct and indirect effects without distributional assumptions (Shrout & Bolger, 2002). Bootstrapping did not assume the normality of the sampling distribution and, therefore, provided more accurate confidence intervals (MacKinnon et al., 2004). The 1,000-resample bootstrapping method in this study was used, aligning with common practices in SEM or path analysis (Hayes, 2018). This approach enabled the simultaneous analysis of the multiple mediating pathways proposed, which was imperative for interpreting the complex relationships among the study variables.

By isolating distinct pathways, assessing model fit with multiple indices, and employing bootstrapping for testing direct and indirect effects, this study aimed to provide a rigorous and comprehensive analysis of the hypothesized relationships. The combination of these advanced statistical techniques enhanced the reliability and validity of the findings, allowing for a nuanced understanding of the factors influencing financial debt delinquency behaviors among young adults.

Summary

This chapter outlined the methodological approach employed to investigate the pathways between parental influences, individual attitudes, and systemic factors in shaping young adults' financial debt delinquency behaviors. Grounded in the theoretical frameworks of the TPB and the FFST, this study leveraged the longitudinal data from the National Longitudinal Survey of

Youth 1979 (NLSY79) and the NLSY79 Child and Young Adult Survey (NLSCYA) to examine the hypothesized relationships. The chapter detailed the conceptual model, hypotheses, variable measurements, and data analysis procedures, including path analysis modeling, missing data handling, model fit evaluation, and possible limitations of the study. This comprehensive approach aimed to provide a thorough understanding of the interplay between familial influences, individual dispositions, and financial debt delinquency behaviors among young adults.

Chapter 4 - Findings

This study aimed to investigate whether intergenerational influences and their related psychological processes were associated with financial debt delinquent behaviors among young adults using the theoretical framework of the Theory of Planned Behavior (Ajzen, 1991) and the Family Financial Socialization Theory (Gudmunson & Danes, 2011). Employing a combination of statistical techniques, including separate path analysis for each pathway, this study sought to provide an understanding of the various direct and indirect pathways between parental influences, individual attitudes, social norms, and perceived financial control. This chapter presents the findings and results derived from the analyses, addressing the hypotheses posited in the previous chapters.

This chapter outlines the results of the analyses. It starts by reviewing the demographic characteristics of the young adults. Subsequently, the outcomes of each path models are discussed, highlighting the direction, magnitude and significance of each mediation effect in explaining financial debt delinquency behavior. The chapter then examines the model fit statistics and bootstrapping analyses, offering insights into the associations between parental influences, individual risky dispositions, and perceived financial control and financial debt delinquency behaviors. Due to the large number of missing values in the dataset, robustness checks such as employing the pairwise deletion method to determine if findings were similar or different and cross-validation analysis were discussed. The chapter concludes with a summary of the analyses, relating them to the hypotheses and expectations.

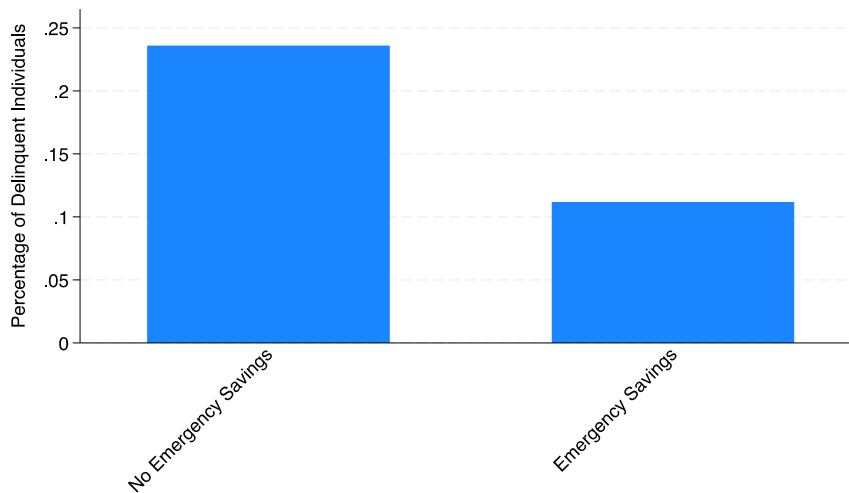
Demographic Characteristics of the Sample

An overview of the sample characteristics is presented in Tables 1, 2 and 3. The analytic sample for this study comprised 2,659 young adults aged 18 to 25 years old ($M = 21.82$, $SD =$

2.18). The gender distribution was nearly equal, with 50.66% males ($n = 1,347$) and 49.34% females ($n = 1,312$). The racial composition of the sample was diverse, with 50.81% identifying as Non-Hispanic/non-Black ($n = 1351$), 28.62% as Black ($n = 761$), and 20.57% as Hispanic ($n = 547$). The majority of the participants were never married (90.49%, $n = 2,406$), while 8.12% were married ($n = 216$), 0.56% were separated ($n = 15$), and 0.83% were divorced ($n = 22$). Regarding educational attainment, 35.34% had a high school diploma ($n = 939$), 36.96% had some college education ($n = 982$), 13.40% had less than a high school education ($n = 356$), 10.99% had a college degree ($n = 292$), and 3.31% had attended graduate school ($n = 88$). Most of the participants were employed (79.60%, $n = 878$), while 20.40% were not employed ($n = 225$). When asked about emergency savings, 68.90% reported having such savings ($n = 1,825$), while 31.10% did not ($n = 823$). Cross tabulation between having an emergency savings fund and any form of delinquency was conducted, and results showed that young adults with emergency savings were less likely to experience financial delinquency, with 11.18% reporting delinquency compared to 23.62% among those without emergency savings (see Figure 7). The chi-square test confirmed this association ($\chi^2 = 55.36$, $p < 0.001$). However, Kendall's tau-b indicated a weak negative relationship ($\tau = -0.1446$, $p < 0.001$).

Figure 6.

Comparison of Delinquency Rates Between Young Adults With and Without Emergency Savings Fund



This study also examined several key continuous variables. The young adults' debt delinquency index had a mean of 0.30 ($SD = 0.76$, range: 0–7). The most common type of delinquency was having an account sent to a collection agency, with 10.9% of the sample ($n = 288$) experiencing this issue. The next most prevalent delinquent behaviors were being late for more than 60 days on utility bills (4.64%, $n = 123$), other bills (3.85%, $n = 102$), credit cards (3.215, $n = 85$), and other loans (3.09%, $n = 82$). In contrast, some delinquent behaviors had much lower proportions, such as foreclosure of property owned or rented (0.23%, $n = 6$), filing for bankruptcy (0.26%, $n = 7$), and having something repossessed (0.68%, $n = 18$).

Because this study aimed to examine intergenerational influences, a chi-square test and Kendall's tau-b were used to assess the relationship between parents' late repayment behavior and young adult's likelihood of having any late repayments. The chi-square test revealed a statistically significant association between the two variables ($\chi^2 = 39.1652$, $df = 1$, $p < 0.001$), indicating that young adults' late repayment behavior was related to their parents' late repayment behavior. Concerning young adults, 20.5% of those whose parents reported late repayments,

were found to have at least one late repayment themselves, compared to only 10.5% of young adults whose parents reported no late repayments. Kendall's tau-b coefficient ($\tau = 0.1261$, $p < 0.001$) further supported this finding, suggesting a weak positive association between the parents' and young adults' late repayment behaviors. These results suggested that young adults whose parents had a history of late repayments were more likely to experience late repayments themselves, warranting further investigation. Among young adults who declared bankruptcy, none had parents who had declared bankruptcy. Chi-square tests suggested no statistically significant association between young adults declaring bankruptcy and their parents declaring bankruptcy. However, the small number of young adults declaring bankruptcy ($n = 6$) limited the reliability of this comparison.

In addition, the general risky attitude score among the young adults' when they were adolescents averaged 5.26 ($SD = 0.97$, range: 2–8), and the perceived financial control score during young adulthood had a mean of 10.87 ($SD = 2.30$, range: 3–14). The parent-child relationship score averaged 3.38 ($SD = 1.39$, range: 2–8). The average household income for the young adults was \$13,317 ($SD = \$20,359$, range: \$0–\$178,150), while the average parental socioeconomic status (SES) was \$52,883 ($SD = \$59,104$, range: \$0–\$448,933).

Table 1.*Summary Statistics (Dependent Variable: Financial Debt Delinquency Behaviors)*

Variable	N	Proportion
<i>Young adults financial debt delinquency behavior in 2012:</i>		
During the last 12 months, young adult and spouse/partner has been late for more than 60 days on:		
Mortgage/Rent	2,652	
Yes	67	2.53%
No	2,585	97.47%
Utility bills	2,651	
Yes	123	4.64%
No	2,528	95.36%
Credit cards	2,649	
Yes	85	3.21%
No	2,564	96.79%
Car Payments	2,652	
Yes	33	1.24%
No	2,619	98.76%
Other loans	2,653	
Yes	82	3.09%
No	2,517	96.91%
Other bills	2,651	
Yes	102	3.85%
No	2,549	96.15%
<i>During the last 12 months, young adult and spouse/partner experienced the following:</i>		
Had an account sent to a collection agency	2,640	
Yes	288	10.91%
No	2,352	89.09%
Had something repossessed	2,654	
Yes	18	0.68%
No	2,636	99.32%
Foreclosure of property owned or were renting	2,652	
Yes	6	0.23%
No	2,646	99.77%
Filed for bankruptcy	2,654	
Yes	7	0.26%
No	2,647	99.74%

Table 2.*Summary Statistics (Key Variables: Continuous variables)*

<i>Variable</i>	<i>N</i>	<i>Mean</i>	<i>SD</i>	<i>Min</i>	<i>Max</i>
<i>Young Adult</i>					
Debt Delinquency Index	2,624	0.30	0.76	0	7
Risky Attitude	1,052	2.53	0.82	1	4
Parental Debt Norms	2,389	0.60	0.85	0	4
Perceived Fin' Control	2,608	10.87	2.30	3	14
Parent Child Rel'ship	982	3.38	1.39	2	8
Household Income	2,659	\$13,317	\$20,359	0	\$178,150
Age	2,659	21.82	2.18	18	25
<i>Parents</i>					
Parental SES	2,659	\$52,883	\$59,104	0	\$448,933

Table 3.*Summary Statistics (Key Variables: Categorical variables)*

<i>Variable</i>	<i>N</i>	<i>Proportion</i>
<i>Young Adults</i>		
<i>Race:</i>	2,659	
Hispanic	547	20.57%
Black	761	28.62%
Non-Hispanic/Black	351	50.81%
<i>Marital Status:</i>		
Never Married	2,406	90.49%
Married	216	8.12%
Separated	15	0.56%
Divorced	22	0.83%
<i>Level of Education:</i>		
Less than HS	356	13.40%
High School Diploma	939	35.34%
Some College	982	36.96%
College	292	10.99%
Graduate School	88	3.31%
<i>Gender:</i>		
Male	1,347	50.66%
Female	1,312	49.34%
<i>Emergency Savings:</i>		
Yes	1,825	68.90%
No	823	31.10%
<i>Employment Status:</i>		
Yes	878	79.60%
No	225	20.40%

Results of Path Models and Tests of Hypotheses

Individual path models were analyzed to address this study's hypotheses (See Appendix B). In the path models, the independent variables were parent-child relationship and parental socioeconomic status, while the dependent variable was debt delinquency behaviors, and the mediator variables were risky attitude, parental debt norms, and perceived financial control. The control variables included in the analysis were age, gender, race, household income, marital status, employment status, highest educational level attained, and ownership of an emergency savings fund. Separate path models based on the hypotheses were conducted to include all control variables. The primary method used to address missing data in the path analyses was full information maximum likelihood (FIML). Additionally, pairwise deletion was employed as a robustness check. Consequently, the findings, including model fit statistics, were reported for both methods. Notably, the number of observations decreased significantly with pairwise deletion.

The following sections present the results for each hypothesis, detailing the relationships between variables and the mediating effects observed.

H1: There is a positive relationship between the parent-child relationship during adolescence and perceived financial control in young adulthood.

H2: Perceived financial control mediates the relationship between the parent-child relationship during adolescence and financial debt delinquency behaviors in young adulthood.

The path analysis using the maximum likelihood method with missing values (MLMV) was conducted and the model included both direct and indirect paths from parent-child relationship to financial debt delinquency, with perceived financial control as the mediator. The path model

results for the relationship between parent-child relationship during adolescence (T1) and perceived financial control during young adulthood (T2) in H1 showed a marginally significant and negative relationship ($\beta = -0.056$, $SE = 0.032$, $p = .08$). This result is contrary to the hypothesized positive relationship. When using pairwise deletion, the sample size reduced from 2,659 to 257, and the relationship between the parent-child relationship and perceived control was found to be positive, but not statistically significant ($\beta = 0.004$, $SE = 0.05$, $p = 0.934$). The model also tested the direct effect of the parent-child relationship on financial debt delinquency, which was found to be not significant ($\beta = 0.011$, $SE = 0.038$, $p = 0.768$). This suggests that the direct impact of the parent-child relationship on financial debt delinquency behaviors in young adulthood is weak when controlling for perceived financial control.

The goodness of fit indices suggested that the model fitted the data well. The likelihood ratio test comparing the model to the saturated model was not significant ($\chi^2(1) = 0.087$, $p = 0.768$), indicating that the proposed model did not significantly differ from the saturated model. The RMSEA was 0.000, suggesting an excellent fit. The CFI and TLI were both 1.000, further supporting the model's goodness of fit. The SRMR was not reported for the FIML method due to the presence of large amounts of missing values. When pairwise deletion was used, the likelihood ratio test comparing the model to the saturated model was also not significant ($\chi^2(1) = 0.596$, $p = 0.440$), indicating that the proposed model did not significantly differ from the saturated model. The RMSEA was 0.000, suggesting an excellent fit. Both the CFI and TLI were above 1.000, and the SRMR was 0.005, further supporting the model's goodness of fit.

To test the significance of the mediation effect (H2), a bootstrap analysis with 1,000 replications was conducted. The results showed a marginally significant indirect effect ($\beta =$

0.009, $SE = 0.005$, $p = 0.07$, $CI [-0.001, 0.019]$), but the confidence intervals included zero, indicating weak evidence for the mediating role of perceived financial control.

In summary, the findings were mixed for the hypothesized relationships. The relationship between parent-child relationship and perceived financial control was found to be weak and inconsistent. Additionally, the direct effect of the parent-child relationship on financial debt delinquency was not significant, suggesting that any potential effect is likely to be mediated by perceived financial control. The mediating role of perceived financial control was also not robust, highlighting the need for further research to confirm this relationship.

H3: Parental socioeconomic status during adolescence has a positive relationship with risky attitude during adolescence.

H4: Risky attitude has a negative relationship with financial debt delinquency behaviors in young adulthood.

H5: Risky attitude mediates the relationship between parental socioeconomic status during adolescence and financial debt delinquency behaviors in young adulthood.

The path model results showed a significant positive relationship between parental socioeconomic status and risky attitude ($\beta = 0.121$, $SE = 0.031$, $p < 0.001$), indicating that higher parental socioeconomic status during adolescence was associated with higher levels of risky attitude in young adulthood, consistent with the hypothesized relationship (H3). The relationship between risky attitude during adolescence and financial debt delinquency in young adulthood ($\beta = -0.083$, $SE = 0.025$, $p < 0.001$) was negative, suggesting that higher levels of risky attitude were associated with lower levels of debt delinquency behaviors in young adulthood, consistent with the hypothesized negative relationship (H4). The model also tested the direct effect of parental socioeconomic status on financial debt delinquency. The results showed a significant

negative direct effect ($\beta = -0.087$, $SE = 0.019$, $p < 0.001$), indicating that higher parental socioeconomic status is directly associated with lower financial debt delinquency behaviors in young adulthood.

The goodness of fit indices suggested that the model did not fit the data well. The likelihood ratio test comparing the model to the saturated model was significant ($\chi^2(1) = 19.52$, $p < 0.001$), indicating that the proposed model significantly differed from the saturated model. The RMSEA was 0.083, and the CFI was 0.947, which was slightly below the recommended threshold of 0.95, further indicating a poor model fit.

Using pairwise deletion, the number of observations was reduced from 2,659 to 552. The likelihood ratio test comparing the model to the saturated model was not significant ($\chi^2(1) = 1.83$, $p = 0.176$), indicating that the proposed model did not significantly differ from the saturated model. The RMSEA was 0.039, the CFI was 0.991, the TLI was 0.822, and the SRMR was 0.006, suggesting a reasonable fit.

To test the significance of the mediation effect (H5), a bootstrap analysis with 1,000 replications was conducted. The results showed that the indirect effect of parental socioeconomic status on debt delinquency behaviors through risky attitude was significant and negative ($\beta = -0.001$, $SE = 0.001$, $p = 0.029$, CI [-0.003, -0.001]). This provided evidence for the mediating role of risky attitude, supporting the hypothesized negative relationship.

In summary, the findings were consistent with the hypothesized relationships. The mediation effect of risky attitude on the relationship between parental socioeconomic status and debt delinquency behaviors was significant and negative, and risky attitude was found to have a negative relationship with debt delinquency behaviors, while parental socioeconomic status had a direct negative effect on debt delinquency behaviors. However, the poor model fit indices

suggested that the proposed model may not have adequately captured the relationships between the variables, and further research is needed to refine the conceptual framework and measurement of the constructs.

H6: Parental socioeconomic status during adolescence has a negative relationship with parental debt norms during adolescence.

H7: Parental debt norms during adolescence have a positive relationship with financial debt delinquency behaviors in young adulthood.

H8: Parental debt norms mediate the relationship between parental socioeconomic status during adolescence and financial debt delinquency behaviors in young adulthood.

The relationship between parental socioeconomic status and parental debt norms was significant and negative ($\beta = -0.081$, $SE = 0.023$, $p < 0.001$), consistent with the hypothesized relationship (H6). This indicated that higher parental socioeconomic status during adolescence is associated with lower levels of parental debt norms. Findings from the path model also showed a significant positive relationship between parental debt norms and delinquency ($\beta = 0.101$, $SE = 0.020$, $p < 0.001$). This suggested that higher levels of parental debt norms were associated with higher levels of debt delinquency behaviors in young adulthood, supporting the hypothesized positive relationship (H7). The model also tested the direct effect of parental socioeconomic status on financial debt delinquency. The results showed a significant negative direct effect ($\beta = -0.087$, $SE = 0.019$, $p < 0.001$), indicating that higher parental socioeconomic status is directly associated with lower financial debt delinquency behaviors in young adulthood.

The goodness of fit indices suggested that the model does not fit the data well. The likelihood ratio test comparing the model to the saturated model was significant ($\chi^2(1) = 20.35$, p

< 0.001), indicating that the proposed model significantly differed from the saturated model. While the CFI was 0.955 and the RMSEA was 0.085, which are within the recommended thresholds, but the TLI was 0.150, indicating a poor model fit.

When pairwise deletion was used, the number of observations was reduced from 2,659 to 848. The likelihood ratio test comparing the model to the saturated model was significant ($\chi^2(1) = 9.98, p = 0.002$), indicating that the proposed model significantly differed from the saturated model. The CFI was 0.943, RMSEA was 0.103, and the SRMR was 0.012, all indicating a poor fit.

To test the significance of the mediation effect (H8), a bootstrap analysis with 1,000 replications was conducted. The results showed that the indirect effect of parental socioeconomic status on debt delinquency behaviors through parental debt norms was negative and statistically significant ($\beta = -0.001, SE = 0.001, p = 0.032, CI [-0.002, -0.001]$). These results provided sufficient evidence for the mediating role of parental debt norms as hypothesized. In summary, the findings supported the hypotheses. Despite the statistical significance, the effect size was very small, and the poor model fit indices suggested that the proposed model may not have adequately captured the relationships between the variables. Further research is needed to refine the conceptual framework and measurement of the constructs.

H9: Parental socioeconomic status during adolescence has a positive relationship with perceived financial control in young adulthood.

H10: Perceived financial control in young adulthood has a negative relationship with financial debt delinquency behaviors in young adulthood.

H11: Perceived financial control mediates the relationship between parental socioeconomic status during adolescence and financial debt delinquency behaviors in young adulthood.

The path model results showed a significant positive relationship between parental socioeconomic status and perceived financial control ($\beta = 0.087$, $SE = 0.018$, $p < 0.001$). This indicated that higher parental socioeconomic status during adolescence was associated with higher levels of perceived financial control in young adulthood, consistent with the hypothesized positive relationship (*H9*). There is a negative relationship between perceived financial control and delinquency ($\beta = -0.300$, $SE = 0.018$, $p < 0.001$). This suggested that higher levels of perceived financial control were associated with lower levels of debt delinquency behaviors in young adulthood, supporting the hypothesized negative relationship (*H10*). The model also tested the direct effect of parental socioeconomic status on financial debt delinquency behaviors. The results showed a significant negative direct effect ($\beta = -0.068$, $SE = 0.019$, $p < 0.001$), indicating that higher parental socioeconomic status is directly associated with lower financial debt delinquency behaviors in young adulthood.

The goodness of fit indices suggested that the model did not fit the data well. The likelihood ratio test comparing the model to the saturated model was significant ($\chi^2(1) = 13.35$, $p < 0.001$), indicating that the proposed model significantly differed from the saturated model. The CFI was 0.986, which was above the recommended threshold of 0.95; however, the RMSEA was 0.068, and TLI was 0.742, indicating a suboptimal model fit.

Using pairwise deletion, the number of observations was reduced from 2,659 to 930. The likelihood ratio test comparing the model to the saturated model was significant ($\chi^2(1) = 11.32$, $p = 0.001$), indicating that the proposed model significantly differed from the saturated model.

While the CFI was 0.972 and met threshold limits, all the other fit indices such as RMSEA at 0.105, the TLI at 0.461, and the SRMR at 0.012 suggested a poor fit.

To test the significance of the mediation effect (H11), a bootstrap analysis with 1,000 replications was conducted. The results showed that the indirect effect of parental socioeconomic status on debt delinquency behaviors through perceived financial control was negative and statistically significant ($\beta = -0.003$, $SE = 0.002$, $p < 0.001$, 95% CI [-0.004, -0.001]), providing sufficient evidence for the mediating role of perceived financial control as hypothesized.

In summary, the findings supported the hypotheses. The mediation effect of perceived financial control on the relationship between parental socioeconomic status and debt delinquency behaviors was statistically significant. However, the suboptimal model fit indices suggested that the proposed model could not adequately capture the relationships between the variables, and further research is needed to refine the conceptual framework and measurement of the constructs.

Robustness Checks

For robustness checks, the pairwise deletion method was employed for each of the path models. Both FIML and pairwise deletion methods yielded consistent results across the hypotheses that were being tested, with slightly different fit indices due to the differences in handling missing data. The FIML method maintained a larger sample size, whereas pairwise deletion significantly reduced the number of observations but yielded consistent findings regarding the relationships among the variables. These results supported the robustness of the model across different methods of handling missing data. It suggested that missing data did not lead to biased results, and the models performed reliably regardless of the method used for handling missing data.

Furthermore, cross-validation was employed to assess the generalizability and predictive performance of the path analysis model. The dataset was randomly divided into a training set (70%) and a validation set (30%). The model was then trained on the training set and subsequently validated on the validation set. The Root Mean Squared Error (RMSE) was calculated as a measure of the model's predictive accuracy. RMSE is a widely used metric for evaluating the accuracy of predictive models (Chai & Draxler, 2014; Hynman & Koehler, 2006). The measure is defined as the square root of the average squared differences between the predicted and actual values.

$$RMSE = \sqrt{\frac{1}{n} \sum_{i=1}^n (y_i - \hat{y}_i)^2}$$

y_i are the actual values, $\hat{y}_i$ are the predicted values, and n is the number of observations in the validation set.

The RMSE was found to be 0.7551, indicating that the model's predictions deviated from the actual financial debt delinquency scores by approximately 0.7551 units on a scale of 0 to 10. In other words, on average, the model's predictions deviated from the actual financial debt delinquency scores by approximately 0.7551 units on a scale of 0 to 10. This relatively low RMSE suggested that the model had good predictive performance and was likely to generalize well, as well as any new data. In short, the use of cross-validation and the calculation of RMSE provided strong evidence of the model's robustness and predictive validity. The findings confirmed that the model did not overfit the training data and could reliably predict financial debt delinquency behavior in other samples, ensuring the generalizability of the results.

Furthermore, since previous research has indicated that young adults who are employed tend to exhibit more debt (Kim et al., 2012), and given that approximately 80% of the sample was employed, a robustness check was conducted to determine if there were significant

differences in results between the full sample and the subsample of employed young adults. This comparison helps determine if employment status might be associated with differences in the relationships being examined. Based on H1, the parent-child relationship showed a marginally significant negative association with perceived financial control in the full sample ($\beta = -0.056$, $p = 0.08$). However, the relationship was not significant in the employed subsample ($\beta = -0.02$, $p = 0.96$), indicating no discernible relationship between parent-child relationship and perceived financial control for employed young adults.

An additional robustness check investigated whether the results held across different employment statuses by analyzing the unemployed subsample (20% of the sample, $n = 225$). This analysis revealed a negative but non-significant relationship between parent-child relationship and perceived financial control ($\beta = -0.07$, $p = 0.38$) for unemployed young adults. This results more closely resembled the full sample finding ($\beta = -0.056$, $p = 0.08$) than the employed subsample ($\beta = -0.02$, $p = 0.96$), suggesting that the marginally significant negative relationship in the full sample may have been primarily driven by unemployed young adults. However, the smaller sample size of the unemployed group may have also contributed to the lack of statistical significance despite a stronger coefficient than in the full sample. In sum, the strength and significance of this relationship vary across the samples, with the full sample showing marginal significance, while both subsamples show non-significant relationships. Nonetheless, the relationship between parent-child relationship and perceived financial control was found to be consistently negative across all samples, contrary to the hypothesized positive relationship.

For H3, the relationship between risky attitude and parental socioeconomic status was positive in both the full sample ($\beta = .121$, $p < .001$) and the subsample of those employed ($\beta =$

.151, $p < .001$), with the effect slightly stronger in the subsample but consistent across both groups. The relationship between risky attitude and debt delinquency in young adulthood (H4) was also found to be negatively and significantly consistent between the full sample ($\beta = -.083$, $p < .001$) and subsample ($\beta = -.081$, $p < .04$). Parental debt norms in H6 showed a significant negative relationship with parental socioeconomic status in both the full sample ($\beta = -.081$, $p < .001$) and the employed subsample ($\beta = -.166$, $p < .001$), with the effect stronger among employed young adults. As for H7, parental debt norms and financial debt delinquency behaviors showed positive and significant relationship in both the full sample ($\beta = .101$, $p < .001$) and the employed subsample ($\beta = .107$, $p < .003$). Regarding H9, parental socioeconomic status showed a positive relationship with perceived financial control in both the full sample ($\beta = 0.087$, $p < .001$) and the employed subsample ($\beta = 0.088$, $p < .001$). The relationship between perceived financial control and financial debt delinquency behaviors (H10) were consistent across both groups ($\beta = -.300$, $p < .001$).

Since 14.7% of Black and Hispanic young adults exhibit at least one debt delinquency behavior in the sample, compared to only 8% among non-Blacks/non-Hispanic young adults, this difference suggests that Blacks and Hispanic young adults are nearly twice as likely to experience debt delinquency as their counterparts from other racial groups. Literature has also found racial disparities in debt delinquency (Houle, 2014; Houle & Addo, 2019). As such, robustness checks was also conducted to compare the results for the full sample versus the subsample of Blacks/Hispanic young adults. The findings for H1 suggested that the relationships examined were robust across the full sample and the Black/Hispanic young adult subsample, as consistent patterns were observed in the effect sizes and significance levels. In the full sample, the relationship between perceived financial control and financial debt delinquency behaviors

was significant and negative ($\beta = -0.300, p < 0.001$). The subsample of Black and Hispanic young adults also remained significant and negative ($\beta = -0.263, p < 0.001$), also though the effect size was slightly smaller. In H3, the relationship between parental socioeconomic status and risky attitude was also consistent across both samples, with a positive and significant relationship observed in the full sample ($\beta = 0.121, p < 0.001$) and a slightly smaller, but still significant, relationship in the Black/Hispanic young adult subsample ($\beta = 0.071, p = 0.094$). In H4, the relationship between risky attitude and financial debt delinquency behaviors was found to be significant and negative in the full sample ($\beta = -0.084, p = 0.001$) while in the Black/Hispanic young adult subsample, this relationship also remained significant and negative ($\beta = -0.087, p = 0.016$), with a similar effect size. Both findings were consistent in indicating that higher levels of risky attitude were associated with lower levels of debt delinquency behaviors.

In H6, the relationship between parental socioeconomic and parental debt norms was found to be negative and significant in the full sample ($\beta = -0.081, p = 0.001$) but became weaker and non-significant in the Black/Hispanic young adult subsample ($\beta = -0.026, p = 0.449$), suggesting that the influence of parental socioeconomic on debt norms may differ across racial groups, potentially due to factors not captured in the model. For H7, the relationship between parental debt norms and financial debt delinquency behaviors was found to be significant and positive in both the full sample ($\beta = 0.101, p < 0.001$) and the Black/Hispanic subsample ($\beta = 0.104, p < 0.001$), indicating that higher levels of parental debt norms were associated with higher levels of debt delinquency behaviors in young adulthood. In H9, the relationship between parental socioeconomic and perceived financial control was also positive and significant in the full sample ($\beta = 0.088, p < 0.001$) and remained significant in the Black/Hispanic subsample ($\beta =$

0.078, $p = 0.004$), though the effect size was slightly smaller. Nonetheless, the core conclusions remained intact.

Furthermore, in H10, the relationship between perceived financial control and financial debt delinquency behaviors was found to be significant and negative in both the full sample ($\beta = -0.300$, $p < 0.001$) and the Black/Hispanic young adult subsample ($\beta = -0.263$, $p < 0.001$). This consistency suggests that higher levels of perceived financial control are associated with lower debt delinquency behaviors across both groups.

Finally, the current U.S. federal poverty guidelines for 2024 set the poverty level at \$15,060 for a single-person household in the contiguous 48 states and the District of Columbia. In the study, the proportion of individuals with delinquency behaviors was found to be slightly lower in the below poverty line subsample (9.15%) compared to the full sample (11.28%). As such, a robustness check was conducted to compare results between the full sample and a subsample of individuals below the poverty line across all hypotheses. For H1, the relationship between perceived financial control and delinquency remained significant and negative in both the full sample ($\beta = -0.300$, $p < 0.001$) and the subsample ($\beta = -0.308$, $p < 0.001$). For H3, parental socioeconomic status was found to be positively related with risky attitude ($\beta = 0.121$, $p < 0.001$) in the full sample and the subsample. However, this relationship is stronger in the below-poverty subsample ($\beta = 0.168$, $p < 0.001$), suggesting that lower-income individuals may exhibit higher risky attitudes when their parental socioeconomic status is higher.

For H4, the negative association between risky attitude and debt delinquency in the subsample was found to be slightly stronger than the full sample ($\beta = -0.119$, $p = 0.007$) than the full sample ($\beta = -0.084$, $p = 0.001$), indicating that risky attitudes may have had a greater impact on delinquency among individuals below the poverty line. As for H6, the relationship between

parental socioeconomic status and parental debt norms were found to be weaker in the below-poverty subsample ($\beta = -0.063, p = 0.104$) than in the full sample ($\beta = -0.081, p = 0.001$), indicating that the influence of parental socioeconomic status on debt norms was less pronounced in lower-income groups. For H7, the relationship between parental debt norms and debt delinquency behaviors was found to be slightly stronger in the below-poverty subsample ($\beta = 0.127, p < 0.001$) than the full sample ($\beta = 0.101, p < 0.001$), suggesting that debt norms within families have a greater impact on delinquency among those below the poverty line. For H9, parental socioeconomic status was found to be significant and positively related with perceived financial control in both samples, but the effect was slightly weaker in the below-poverty subsample ($\beta = 0.062, p = 0.034$), compared to the full sample ($\beta = 0.088, p < 0.001$), suggesting that perceived financial control is somewhat resilient across income levels but slightly diminished among lower-income individuals. Finally, for H10, perceived financial control was found to be significantly and negatively associated with debt delinquency behaviors in both the full sample ($\beta = -0.300, p < 0.001$) and the below-poverty subsample ($\beta = -0.308, p < 0.001$), indicating that perceived financial control is a crucial protective factor against delinquency even among lower-income individuals.

In summary, the results suggest that while being below the poverty line may affect the magnitude of certain relationships, the overall direction and significance of the findings remain consistent across different income levels. Specifically, the relationships between risky attitudes, parental debt norms, and delinquency behaviors are stronger in the below-poverty subsample, indicating that socioeconomic factors may have a more pronounced impact on financial behaviors among lower-income individuals. This supports the robustness of the tested theoretical models, indicating their relevance across varying economic contexts. The consistency of these

relationships supports the generalizability of the findings, making them applicable across diverse income levels.

Summary of Analyses

Path Analysis Findings

The path analysis was conducted to systematically examine the relationships between parental influences during adolescence and financial debt delinquency behaviors in young adulthood, mediated by various psychological constructs. This study focused on eleven hypotheses, each targeting a specific direction and effect regarding these relationships.

Hypotheses 1 - 2

The mixed results for H1 highlighted the complex nature of parent-child relationships and their effects. Furthermore, the bootstrap analysis showed an insignificant indirect effect for H2, providing minimal evidence for the mediating role of perceived financial control.

Hypotheses 3 - 5

Consistent with the hypotheses, the results indicated a positive relationship between parental socioeconomic status and risky attitude (H3) and a negative relationship between risky attitude and financial debt delinquency behaviors (H4). The robustness checks using pairwise deletion confirmed these findings, though the model fit indices suggested some issues with the model specification. Bootstrap analysis confirmed a significant and negative indirect effect, suggesting that the mediating role of risky attitude was consistent with the initial hypothesis (H5).

Hypotheses 6 - 8

The path model showed a negative relationship between parental socioeconomic status and parental debt norms (H6) and a positive relationship between parental debt norms and debt

delinquency behaviors (H7). The mediation effect was also found to be statistically significant and bootstrap analysis provided sufficient evidence for the mediating role of parental debt norms (H8). The pairwise deletion method provided similar insights, highlighting the robustness of the primary findings despite poor model fit indices.

Hypotheses 9 - 11

The results showed a significant positive relationship between parental socioeconomic status and perceived financial control (H9), and a significant negative relationship between perceived financial control and debt delinquency behaviors (H10). The robustness checks using pairwise deletion corroborated these findings, though model fit indices indicated a need for further refinement. Bootstrap analysis indicated sufficient evidence for the mediating role of perceived financial control (H11).

Robustness Checks and Model Fit

To ensure the robustness of the findings, pairwise deletion was employed alongside the primary method of full information maximum likelihood (FIML) for handling missing data. The pairwise deletion method resulted in a significant reduction in the number of observations, yet it provided consistent findings across the hypotheses tested, except for H1 and H2. This consistency across different methods for handling missing data enhanced confidence in the validity of the conclusions drawn from the data.

However, the model fit indices suggested that some models did not adequately capture the relationships between the variables. Issues with model complexity and specification were indicated by discrepancies in indices such as the CFI and TLI. These findings suggested that further research is needed to refine the conceptual framework and improve the measurement of

constructs to better understand these relationships. However, the use of cross-validation and the calculation of RMSE provided strong evidence of the model's robustness and predictive validity.

Conclusion

Overall, the path analyses yielded support for the hypothesized relationships (See Appendix C: Path Analysis Results). Ten of the hypotheses tested were supported, while Hypotheses H1 and H2 revealed complexities, highlighting the intricate nature of the relationships between parental influences, psychological constructs, and financial behaviors (see Appendix D: Summary of Hypotheses Testing). Further research is needed to refine the conceptual framework and improve the measurement of constructs to better capture these complex relationships. The robustness checks and model fit evaluations underscored the importance of addressing model complexity and specification issues to enhance the reliability and validity of future findings.

Chapter 5 - Discussion, Limitations, Implications, and Conclusion

The purpose of this study was to investigate the pathways between parental influences, individual risky attitudes, parental debt norms, and perceived financial control in shaping young adults' financial debt delinquency behavior. The research questions focused on examining the mediating roles of risky attitude, parental debt norms, and perceived financial control in the relationships between parent-child relationships, parental socioeconomic status, and financial debt-delinquency behaviors. In general, the findings of this study offered support for the hypothesized relationships based on the theory of planned behavior (TPB) (Ajzen, 1991) and family financial socialization theory (FFST) (Gudmunson & Danes, 2011), aligning with the assumptions of these theoretical frameworks and findings of previous studies (Shim et al., 2012; Rutherford et al., 2009; Tang, 2017; Xiao et al., 2011). Six of the hypotheses were supported, while one did not. Nevertheless, the results of this study have important implications for policymakers, financial practitioners, educators, and families. Limitations of this study and recommendations for future research are also discussed in this chapter.

Discussion on Findings

The findings in this study provided support for both the TPB and FFST, while also revealing some nuanced relationships between parental influences, individual attitudes, and financial behaviors. Firstly, the evidence for the relationship between the parent-child relationship and perceived financial control was found to be weak and inconsistent (H1). The differences in results between FIML and pairwise deletion can be attributed to how each method handled the missing data. FIML used all available data points to estimate the model parameters, resulting in more reliable and less biased estimates (Allison, 2003; Enders, 2010; Schaeffer & Graham, 2002). In contrast, pairwise deletion significantly reduced the sample size by excluding

any case with missing data for any pair of variables, which can lead to a loss of statistical power and potentially biased estimates (Allison, 2003; Enders, 2010; Schaeffer & Graham, 2002). This was evident in the study, where FIML showed a marginally significant effect while pairwise deletion did not, primarily due to the drastic reduction in the number of observations from 2,659 to 257 when using pairwise deletion. While the model fits the data reasonably well, the discrepancy in results using the pairwise deletion suggests that there may be aspects of model complexity or misspecifications that warrant further investigation. Furthermore, the mediating role of perceived financial control was not robust. As such the mixed results for the relationships between parent-child closeness and perceived financial control present a challenge to the FFST.

The FFST suggests that positive parent-child relationships should foster better financial outcomes, but the results do not consistently support this idea, implying that this aspect of FFST may be more complex than initially hypothesized. While a closer parent-child relationship foster better financial communication during adolescence (Kim & Torquati, 2021; Lanz et al., 2020; Rosa et al., 2018; Tang, 2017), they may not necessarily translate to higher levels of perceived financial control in young adulthood. One plausible explanation may be the non-linear relationship between parent-child closeness and perceived financial control (Kuczynski et al., 2014; Kuczynski & De Mol, 2015; Roberts, 1986), or other mediating factors not accounted for in the model. Furthermore, studies have also found that parental influence declines as adolescents grow older and parents' relationships with adolescents change over time (Collis & Laursen 2004; DeGoede et al., 2009). Moreover, TPB also posits overlapping relationships between attitudes, social norms, and perceived financial control (Ajzen, 1991), indicating that these correlations may have contributed to the mixed findings. Future research could benefit from investigating the interactions among these elements.

Another key finding was the support for H3 and H4. The positive relationship between parental socioeconomic status and risky attitude during adolescence, and the subsequent negative relationship between risky attitude during adolescence and financial debt delinquency, offer an interesting perspective on both TPB and FFST. The TPB argues that attitudes, social norms, and perceived behavioral control are key predictors of behavioral intentions and actual behaviors (Ajzen, 1991). However, attitudes are not limited to general positive or negative evaluations, but also encompass specific beliefs and evaluations related to a particular behavior (Ajzen, 2002). This can be supported by the concept of ‘smart risk-taking’ attitude (Holmes, 2004; Kish-Gephart & Campbell, 2015; Kish-Gephart & Campbell, 2017) where individuals who hold a favorable attitude towards ‘smart risk-taking’ were found to be more likely to take calculated risks and making informed financial choices in their financial behaviors. In the context of this study, adolescents from higher socioeconomic backgrounds who develop a risky attitude may not necessarily engage in reckless financial behaviors, but rather use their resources and knowledge to take calculated financial risks, such as investing in education, purchasing a home, or buying insurance, which are seen as investments in their future (Hoskisson et al., 2016).

Studies have shown that smart risk-taking attitudes were more likely to be fostered in higher socioeconomic environments due to their access to abundant social and economic resources (Holmes, 2004; Kish-Gephart & Campbell, 2015; Kish-Gephart & Campbell, 2017; Kozubíková et al., 2017; Krueger & Dickson, 1994; Luhr, 2018) Individuals from upper social class backgrounds tend to focus on rewards and opportunities, are more optimistic about future outcomes, and are more likely to take risks (Côté, 2011; Kish-Gephart & Campbell, 2015). From a FFST perspective, these results also highlight how family economic background can shape financial attitudes and behaviors (Gudmunson & Danes, 2011; Shim et al., 2015). For

example, Letkiewicz et al. (2019) found that college students with higher levels of parental financial support were more likely to engage in financial risk-taking behaviors, such as taking out more student loans. This suggests that the financial safety net provided by affluent parents allows children to take greater risks without the fear of dire financial consequences.

Regarding the hypotheses on parental debt norms, the results indicated a significant negative relationship between parental socioeconomic status and parental debt norms in H6, as well as a significant positive relationship between parental debt norms and debt delinquency behaviors in H7. These findings aligned with previous studies that suggest higher household income is associated with better financial management practices, including lower debt levels (Bridges & Disney, 2004; Chien & DeVaney, 2001; Houle, 2014; Shim et al., 2010; Tang, 2017). The positive relationship between parental debt norms and young adults' debt delinquency behaviors is also consistent with the TPB framework which posits that social norms are a significant predictor of behavior, influencing individuals to conform to the financial behaviors modeled by their parents as norms (Azjen, 2002). Furthermore, this finding supported the notion that financial behaviors are often modeled and transmitted within families, consistent with the FFST (Gudmunson & Danes, 2011; LeBaron et al., 2020) and the broader literature (Curran et al., 2018; Fan et al., 2022; Sotiropoulos & Astous, 2013; Webley & Nyhus, 2006; Tang, 2017). The significant indirect effect of parental socioeconomic status on debt delinquency behaviors through parental debt norms further underscores the importance of family economic background in shaping financial outcomes. This is consistent with research showing that higher-income households are more likely to have access to financial education and resources that promote prudent financial behaviors, thereby reducing the likelihood of accruing excessive debt and

delinquency (Grinstein-Weiss et al., 2011; Jorgenson & Savla, 2010; Lusardi & Tufano, 2015; Xiao et al., 2011).

Finally, the findings on the mediated effects of perceived financial control on parental socioeconomic status and financial debt delinquency behaviors (H11) were supported by the TPB framework and existing literature (Han et al., 2015; Xiao et al., 2011). Consistent with TPB (Ajzen, 1991), individuals with more financial resources tend to feel they have more control over their ability to make positive financial choices. Thus, perceived financial control was influenced by the presence of adequate resources and the ability to overcome barriers to behavior, which was operationalized as parental socioeconomic status in this study. Higher income households typically have more resources at their disposal, contributing to a greater sense of control over their actions and choices. Additionally, findings indicate a significant negative relationship between perceived financial control and debt delinquency behaviors (H10), consistent with the arguments posited by Ajzen in the TPB (Ajzen, 2002) and supported by literature (Chudry et al., 2011; Xiao et al., 2011; Zimmerman et al., 2015). According to Ajzen (1991), perceived financial control is the strongest predictor of behavior. It is reasonable to assume that individuals are more likely to perform behaviors over which they feel high levels of control compared to those which they feel little control. This theoretical framework suggests that higher levels of perceived financial control can lead to better financial behaviors, such as reduced debt delinquency.

In sum, the hypotheses in this study supported the TPB and FFST frameworks, as the significant relationships between various mediators, key predictors and debt delinquency behaviors were established.

Limitations of the Study

This study, while providing valuable insights into the relationships between parental influences, psychological factors, and financial behaviors, is subject to several limitations that should be considered when interpreting the results. One of the main limitations of this study was the use of secondary data from the National Longitudinal Survey of Youth 1979 (NLSY79) and the NLSY79 Child and Young Adult Survey (NLSCYA). The use of secondary data in social science research has been shown to present challenges related to the alignment of the available variables with the study's specific research questions and theoretical framework (Cheng & Phillips, 2014; Johnston, 2014). Although these datasets provided a rich source of information, they were not specifically designed to address the research questions of this study, potentially constraining the operationalization of constructs and their alignment with TPB and FFST. This limitation reduced the ability to control for potential confounding variables or explore additional factors influencing the relationships of interest (Maxwell et al., 2018), weakening causal claims.

The extensive missing data in the dataset posed challenges for the analyses, as evidenced by the significant reduction in the number of observations when using pairwise deletion. Missing data is a common issue in longitudinal studies, and it can introduce bias and reduce the statistical power of the analyses (Enders, 2010; Graham, 2009). Although the full information maximum likelihood (FIML) method was employed to handle missing data, which has been shown to produce unbiased parameter estimates and standard errors under the assumption of missing at random (MAR) (Enders, 2010; Graham, 2009), the potential impact of missingness on the results cannot be entirely ruled out. The presence of missing data may have influenced the observed relationships between the variables and contributed to the nonsignificant findings, especially in the case of H1, and other suboptimal model fit results.

The study also faced several measurement-related limitations. Using a single measure for the parent-child relationship (closeness) may not have fully captured this complex construct (Popov & Illesanmi, 2015). Similarly, using household income to measure parental socioeconomic status based on Dwyer's et al's (2013) study, compared with other studies using broader measures (Shim et al., 2012; Xiao et al., 2011), may have contributed to the nonsignificant indirect effect of parental socioeconomic status on debt delinquency behaviors through risky attitude. Moreover, the use of a general measure for risky attitude and proxy measures for social norms may not align with the domain-specific constructs advocated by the TPB (Menard, 2002). This divergence could affect the construct validity and explanatory power of the TPB components, influencing behavior prediction (Perugini et al., 2010; Azjen, 1991). Additionally, the binary nature of the dependent variable, reflecting debt delinquency behavior, may have presented potential analytical constraints. While dichotomous outcomes facilitate clear distinctions between behaviors, they may oversimplify the complexity of financial behavior and overlook the gradations of delinquency severity (Agresti, 2007; MacCallum et al., 2002).

Furthermore, the relatively low incidence of high delinquency in the dataset could have affected the statistical power and generalizability of the findings. This scarcity of cases may limit the generalizability of findings related to severe financial difficulties, as low prevalence can result in reduced statistical power, complicating the detection of significant effects and associations (Button et al., 2013; Cohen, 1992; VanVoorhis & Morgan, 2007). The external validity of the findings may also be limited by the specific characteristics of the NLSY79 and NLSCYA samples, which are based on a specific cohort of individuals born in the United States, thus limiting the generalizability of the results to other populations, cultural contexts, or time periods (Bornstein et al., 2013; Henrich et al., 2010).

The complexity of the conceptual model and the specification issues indicated by the model fit indices also raised some methodological implications. While the robustness checks using pairwise deletion provided consistent findings, the poor model fit indices for some of the research questions suggested that the proposed model may not have adequately captured the relationships between the variables. This highlights the need for further refinement of the conceptual framework and the measurement of constructs to better understand the complex interplay between parental influences, psychological factors, and financial behaviors.

In short, these limitations underscore the need for cautious interpretation of the results and provide direction for future research in this area. Despite these constraints, the study offers valuable insights into the relationships between parental influences, psychological factors, and financial behaviors, contributing to the existing body of knowledge in this field. The implications for various stakeholders will be discussed in the next section, taking into account these limitations and their potential impact on the practical application of the findings.

Implications for Research and Practice

Implications for Policymakers

Policymakers play a crucial role in shaping financial education frameworks that can significantly affect young adults' financial behaviors. The findings of this study provide important insights that can inform policy decisions aimed at improving financial literacy and reducing financial delinquency among young adults. When weighing the costs and benefits of potential interventions, policy makers should consider both the statistical significance and the economic significance of these findings. For example, the study found that each standard deviation increase in perceived financial control results in a 229.91% decrease in the average debt delinquency index, while each standard deviation increase in risky attitude results in a

22.67% decrease in the average debt delinquency index (See Appendix C). This substantial decrease does not imply that debt delinquency becomes negative but rather suggests a very strong effect that might eliminated debt delinquency for many individuals. In practical terms, this suggests that interventions successful in significantly improving young adults' perceived financial control is approximately 10.14 times more impactful in decreasing the average debt delinquency index compared to interventions focusing on increasing smart-risk taking attitude. In light of these varying effect sizes, policymakers should carefully evaluate the cost-effectiveness of different intervention strategies. Programs aimed at enhancing perceived financial control may offer more substantial benefits relative to their costs, compared to interventions focused solely on improving smart risky attitudes in the context of financial behavior.

This finding aligns with recent research on school-based financial education programs. For instance, Frisancho (2023) found that financial education interventions can lead to significant improvements in financial literacy and behavior, with effects persisting three years after the intervention. Treated students were 0.007 standard deviations more likely to have debt, but importantly, not more likely to be in arrears, suggesting that the intervention may have led to more responsible borrowing behavior. These findings support the value of implementing policies that embed financial literacy curricula in both primary and secondary educational systems. By introducing financial concepts early, children can develop a foundational understanding that prepares them for more complex financial decisions in adulthood (Fletcher & Wright, 2024; Jorgensen & Savla, 2010; LeBaron et al., 2020).

Moreover, considering the mediation effects observed in this study, policymakers should recognize the indirect pathways through which parental socioeconomic status influences financial delinquency behaviors. For instance, the study found that the mediation effect of risky

attitude between parental socioeconomic status and financial debt delinquency behaviors is negative and significant based on the bootstrapping analysis, suggesting that enhancing parental socioeconomic status could indirectly reduce financial delinquency through fostering a positive risky attitude. Similarly, the positive mediation effect of perceived financial control between parental socioeconomic status and financial debt delinquency behaviors underscores the importance of boosting young adults' financial self-efficacy as a strategic intervention point.

Implications for Financial Educators

Financial educators are uniquely positioned to help young adults and families develop smart risk-taking attitudes and improve overall financial literacy. Given that this study shows children from higher parental socioeconomic status exhibit higher risk-taking attitudes and lower financial debt delinquency behaviors, educators should focus on leveling the playing field by providing all students with tools to take an informed and balanced approach to risk-taking in financial decisions (Tharayil, 2024) such as a comprehensive strategy that addresses multiple aspects of financial literacy and behavior (Ayton et al., 2020; Baltruschat et al., 2020; Barcellos et al., 2016; Collins & O' Rourke, 2010; Damien et al., 2020). Furthermore, engaging parents through family-based financial education initiatives can reinforce learning and address intergenerational influences on financial attitudes (Taylor et al., 2012). Financial educators should also target interventions that can be realistically modified within short-term programs, such as identifying motivations for borrowing or increasing smart-risk taking cognitive styles in decision making, as these are more likely to yield tangible results (Armitage & Conner, 2002).

Given the strong relationship between perceived financial control and reduced debt delinquency, educators should prioritize building students' confidence and skills in managing their finances. Additionally, they should incorporate discussions about societal and familial

attitudes towards debt, helping students critically evaluate these norms and develop their own informed perspectives. By implementing this multi-faceted approach, financial educators can help young adults develop a well-rounded set of financial skills and attitudes, better preparing them to navigate complex financial decisions and reduce the risk of debt delinquency in the future.

Implications for Financial Practitioners

Financial practitioners, including advisors and counselors, play a crucial role in assisting individuals in managing their personal finances. The findings of this study highlighted the complex interplay of parental influences, individual risky attitudes, parental debt norms, and perceived financial control in shaping young adults' financial behaviors. Given this complexity, practitioners should adopt a holistic approach when working with clients (Britt, 2016; Chatterjee & Fan, 2023; Collins & O' Rourke, 2010; Fan, 2021; Lyons, 2005). This involves developing personalized financial plans that consider clients' backgrounds, including their familial and socioeconomic contexts. By understanding the unique experiences and challenges faced by individuals from diverse cultural and economic backgrounds, practitioners can provide more targeted and effective guidance (Abrantes-Braga & Veludo-de-Oliveira, 2020; Ayton et al., 2020; Barcellos et al., 2016; Despard et al., 2020; Lea et al., 199).

To better serve their clients, financial practitioners should prioritize continuous professional development in the areas of behavioral finance and financial psychology. Training in these fields can enhance practitioners' understanding of the psychological and emotional factors that influence financial decision-making, such as attitudes toward risk, perceived control, and the impact of social norms (Marsden et al., 2011; Migliavacca, 2021; Rabbani et al., 2021; Weitzel & Kirchler, 2023). By incorporating insights from behavioral finance and financial

psychology into their practice, advisors, and counselors can help clients identify and overcome obstacles to achieve their financial goals, such as debt management, savings, and long-term financial planning.

In addition to providing personalized guidance, financial practitioners should actively engage in community outreach programs that aim to raise financial awareness and literacy. These initiatives are particularly important in underserved areas, where individuals may have limited access to financial education and resources (Despard et al., 2020; Friedline & West, 2016). By collaborating with local organizations, schools, and community leaders, practitioners can help develop and deliver financial literacy programs that address the specific needs and challenges of these communities (Jeen et al., 2023; Neuberger et al., 2022). These efforts can not only improve individuals' financial knowledge and skills, but they can also foster a sense of empowerment and self-efficacy, which are essential for promoting responsible financial behaviors among young adults (Serido et al., 2015; Shim et al., 2009).

Implications for Families and Young Adults

Families, particularly parents, have a significant influence on the financial behaviors of young adults. Parents should strive to model positive financial behaviors, such as budgeting, saving, and responsible spending. Engaging children in discussions about finances, including the challenges and strategies for overcoming them, can also play a crucial role in shaping their financial attitudes and capabilities (Fan et al., 2022; Grinstein-Weiss et al., 2011; Jorgensen et al., 2017; LeBaron et al., 2020; Serido et al., 2015). Families might benefit from participating in community financial education workshops that can provide tools and strategies for improving their financial health.

Furthermore, the analysis from this study also revealed a complex relationship between parental socioeconomic status, parental debt norms, and financial debt delinquency behavior. Significant differences in the effect sizes of these variables were found, highlighting the importance of considering both statistical significance and practical impact. For instance, a one standard deviation decrease in parental debt norms is associated with a 28.83% decrease in the average debt delinquency score. This substantial effect underscores the critical role that parental attitudes toward debt play in shaping young adults' financial behaviors. A one standard deviation increase in parental SES is associated with a 0.253% decrease in the average debt delinquency score, mediated through parental debt norms. While statistically significant, this effect is considerably smaller than that of parental debt norms directly. To provide a more practical perspective, the effect of a 10% increase in parental SES (equivalent to an increase from \$50,000 to \$55,000) was also examined. This 10% increase is associated with approximately a 0.0214% decrease in the average debt delinquency score through the indirect pathway of parental debt norms. This minimal effect further illustrates the relatively small practical impact of parental SES on debt delinquency when mediated through debt norms. The stark contrast between these effect sizes is noteworthy. The direct effect of parental debt norms (28.83% decrease per standard deviation) is more than 100 times larger than the indirect effect of parental SES (0.253% decrease per standard deviation). In addition, the small indirect effect (-0.001) of parental socioeconomic status on debt delinquency behaviors through parental debt norms suggests that while this pathway exists, its practical impact on debt delinquency is minimal compared to the direct effect of parental debt norms. In summary, while both effects are significant, these results suggest that interventions aimed at improving young adults' financial debt behaviors might be more effective if they focus on shaping healthy debt norms within

families, rather than solely addressing socioeconomic factors, consistent with TPB and FFST theoretical frameworks.

Therefore, efforts should focus on altering the parental debt norms and promoting healthy financial practices within the households. This approach, which addresses individual attitudes, social norms, and perceived control, can effectively encourage responsible financial behaviors among young adults (Fan & Chatterjee, 2019; Tang et al., 2015). This may also involve developing targeted interventions for specific subgroups of families and young adults based on their unique socioeconomic backgrounds, cultural contexts, and personal experiences (Gill & Bhattacharya, 2019; Luhr, 2018). For example, interventions designed for young adults from low-income families may need to address the specific challenges and barriers they face in accessing financial resources and building financial stability (Despard et al., 2020; Friedline & West, 2016).

Conclusion and Future Research

This study extended previous research by examining the mediating roles of perceived financial control, risky attitude, and parental debt norms in the relationships between parental influences and financial debt delinquency behaviors. It provided a more nuanced understanding of the pathways through which financial socialization occurs. The findings underscored the need for further research to refine the conceptual framework and measurement of constructs to better capture these complex relationships. Importantly, this study highlighted the value of considering effect sizes alongside statistical significance. Future researchers should prioritize reporting and interpreting effect sizes to provide a more comprehensive understanding of the practical significance of their findings, particularly in complex models with multiple predictors (Sullivan & Feinn, 2012).

Future research should aim to replicate the study in different populations and contexts to establish the generalizability of the results and identify potential boundary conditions or incorporating additional variables, such as peer influences, financial literacy, and cultural factors, that may play a role in shaping young adults' financial attitudes, social norms, perceived financial control and behaviors (Huston, 2010; Lusardi & Mitchell, 2014; Tang & Peter, 2015).

The study also emphasized the importance of considering multiple factors, such as parent-child relationships, parental socioeconomic status, and psychological constructs, in understanding the development of financial behaviors across generations (Gudmunson & Danes, 2011; Kim & Chatterjee, 2013; Shim et al., 2010). This aligns with the growing body of literature that emphasizes the role of family socialization processes in shaping individuals' financial attitudes, knowledge, and behaviors (Gutter et al., 2010; Jorgensen et al., 2017; LeBaron et al., 2018).

To advance the field, future studies should focus on developing and validating scales that more accurately assess the key constructs of interest, such as parent-child relationship quality, financial attitudes, and perceived control (Dew & Xiao, 2011; Serido et al., 2015). Additionally, researchers should consider employing qualitative methods, such as in-depth interviews or focus groups, to gain a deeper understanding of the experiences, beliefs, and motivations that shape individuals' financial behaviors (Gudmunson & Danes, 2011; Pinto et al., 2005). By combining quantitative and qualitative approaches, future research can provide a more comprehensive and contextualized understanding of the intergenerational transmission of financial attitudes and behaviors. This multifaceted approach will not only enhance the theoretical understanding, but also inform more effective interventions and policies aimed at promoting financial well-being across generations.

References

- Abdul-Ghafoor, K., Akhtar, M. (2024). Parents' financial socialization or socioeconomic characteristics: which has more influence on Gen-Z's financial wellbeing? *Humanity and Social Sciences Communication*, 11, 522, 789–900.
<https://doi.org/10.1057/s41599-024-03007-3>.
- Abrantes-Braga, F. D. M., & Veludo-de-Oliveira, T. (2020). Help me, I can't afford it! Antecedents and consequence of risky indebtedness behavior. *European Journal of Marketing*, 54(9), 2223–2244.
- Acock, A. C. (1984). Parents and their children: The study of inter-generational influence. *Sociology and Social Research*, 68 (2), 151–171.
- Addo, F. R., Houle, J. N., & Simon, D. (2016). Young, black, and (still) in the red: Parental wealth, race, and student loan debt. *Race and Social Problems*, 8 (1), 64–76.
- Agarwal, S., Sing, T. F., & Zhang, X. (2024). Intergenerational Bankruptcy Risks: Learning from parents' mistakes. *Journal of Financial Intermediation*, 10, 1–36.
- Aggeborn, L. (2021). The impact of mothers' and fathers' political socialization on children's political development. *Political Behavior*, 43 (2), 619–645.
<https://doi.org/10.1007/s11109-020-09604-7>
- Agnew S (2018) Empirical measurement of the financial socialization of children by parents. *Young Consumers* 19 (4), 421–431.
- Agresti, A. (2007). *An introduction to categorical data analysis* (2nd ed.). Wiley.
- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50 (2), 179–211.
- Ajzen, I. (2020). The theory of planned behavior: Frequently asked questions. *Human Behavior and Emerging Technologies*, 2 (4), 314–324.
- Albert, D., & Steinberg, L. (2011). Judgment and decision making in adolescence. *Journal of Research on Adolescence*, 21 (1), 211–224.
- Allison, P. D. (2003). Missing data techniques for structural equation modeling. *Journal of Abnormal Psychology*, 112 (4), 545–557.
- Allsop, D. B., Boyack, M. N., Hill, E. J., Loderup, C. L., & Timmons, J. E. (2021). When parenting pays off: Influences of parental financial socialization on children's outcomes in emerging adulthood. *Journal of Family and Economic Issues*, 42, 545–560.
- Amato, P. R. (1987). Family processes in one-parent, step-parent, and intact families: The child's point of view. *Journal of Marriage and the Family*, 49 (2), 327–337.

- Armitage, C. J., & Conner, M. (2001). Efficacy of the theory of planned behavior: A meta-analytic review. *British Journal of Social Psychology*, 40(4), 471–499.
- Armitage, C. J., Armitage, C. J., Conner, M., Loach, J., & Willetts, D. (1999). Different perceptions of control: Applying an extended theory of planned behavior to legal and illegal drug use. *Basic and Applied Social Psychology*, 21 (4), 301–316.
- Armitage, C. J., & Conner, M. (1999). The theory of planned behavior: Assessment of predictive validity and perceived control. *British Journal of Social Psychology*, 38 (1), 35–54.
- Antonakis, J., Bendahan, S., Jacquart, P., & Lalive, R. (2010). On making causal claims: A review and recommendations. *The Leadership Quarterly*, 21(6), 1086–1120.
- Arlot, S., & Celisse, A. (2010). A survey of cross-validation procedures for model selection. *Statistics Surveys*, 4, 40–79.
- Ayton, P., Bernile, G., Bucciol, A., & Zarri, L. (2020). The impact of life experiences on risk taking. *Journal of Economic Psychology*, 79, Article 102274.
<https://doi.org/10.1016/j.joep.2020.102274>
- Bapat, D. (2020). Antecedents to responsible financial management behavior among young adults: moderating role of financial risk tolerance. *International Journal of Bank Marketing*, 38 (5), 1177–1194.
- Baltruschat, S., Cándido, A., Megías, A., Maldonado, A., & Catena, A. (2020). Risk proneness modulates the impact of impulsivity on brain functional connectivity. *Human Brain Mapping*, 41 (4), 943–951.
- Barcellos, S. H., Carvalho, L. S., & Lleras-Muney, A. (2016). Financial education interventions targeting immigrants and children of immigrants: Results from a randomized control trial. *The Journal of Consumer Affairs*, 50 (2), 263–285.
- Bernerth, J. B., & Aguinis, H. (2016). A critical review and best-practice recommendations for control variable usage. *Personnel Psychology*, 69 (1), 229–283.
- Bjerk, D. (2007). Measuring the relationship between youth criminal participation and household economic resources. *Journal of Quantitative Criminology*, 23, 23–30.
- Bornstein, M. H. (2016). Determinants of parenting. *Developmental psychopathology* (3rd ed., pp.1–91). Wiley.
- Bornstein, M. H., Jager, J., & Putnick, D. L. (2013). Sampling in developmental science: Situations, shortcomings, solutions, and standards. *Developmental Review*, 33 (4), 357–370.

- Bowman, S. W. (2011). Multigenerational interactions in black middle class wealth and asset decision making. *Journal of Family and Economic Issues*, 32, 15–26.
- Bridges, S., & Disney, R. (2004). Use of credit and arrears on debt among low-income families in the United Kingdom. *Fiscal Studies*, 25 (1), 1–25.
<https://doi.org/10.1111/j.1475-5890.2004.tb00094.x>
- Britt, S. L. (2016). The intergenerational transference of money attitudes and behaviors. *Journal of Consumer Affairs*, 50 (3), 539–556.
- Brown, M., Grigsby, J., van der Klaauw, W., J., & Zafar, B. (2015). Financial education and the debt behavior of the young. Federal Reserve Bank of New York Staff Reports, no. 634.
https://www.newyorkfed.org/medialibrary/media/research/staff_reports/sr634.pdf
- Bryman, A. (2016). *Social research methods*. Oxford university press.
- Bureau of Labor Statistics. (n.d.). *National Longitudinal Survey of Youth 1979 children and young adults*. Bureau of Labor Statistics. <https://www.bls.gov/nls/nlsy79-children.htm>
- Burcher, S. A., Serido, J., Danes, S., Rudi, J., & Shim, S. (2018). Using the expectancy-value theory to understand emerging adults' financial behavior and financial well-being. *Emerging Adulthood*, 8 (1), 66–75.
- Button, K. S., Ioannidis, J. P., Mokrysz, C., Nosek, B. A., Flint, J., Robinson, E. S., & Munafò, M. R. (2013). Power failure: why small sample size undermines the reliability of neuroscience. *Nature Reviews Neuroscience*, 14 (5), 365–376.
- Cabrera, N., Fitzgerald, H. E., Bradley, R. H., & Roggman, L. (2007). Modeling the dynamics of paternal influences on children over the life course. *Applied Development Science*, 11 (4), 185–189.
- Chai, T., & Draxler, R. R. (2014). Root mean square error (RMSE) or mean absolute error (MAE)?—Arguments against avoiding RMSE in the literature. *Geoscientific Model Development*, 7 (3), 1247–1250.
- Charles, C. Z., Dinwiddie, G., & Massey, D. S. (2004). The continuing consequences of segregation: Family stress and college academic performance. *Social Science Quarterly*, 85 (5), 1353–1373.
<https://doi.org/10.1111/j.0038-4941.2004.00280.x>
- Chase, H. W., Fournier, J. C., Bertocci, M. A., Greenberg, T., Aslam, H., Stiffler, R., & Phillips, M. L. (2017). A pathway linking reward circuitry, impulsive sensation-seeking and risky decision-making in young adults: identifying neural markers for new interventions. *Translational Psychiatry*, 7 (4), 1096–2016.
- Cheng, H. G., & Phillips, M. R. (2014). Secondary analysis of existing data: opportunities and implementation. *Shanghai Archives of Psychiatry*, 26 (6), 371–375.

- Chien, Y. W., & Devaney, S. A. (2001). The effects of credit attitude and socioeconomic factors on credit card and installment debt. *Journal of Consumer Affairs*, 35 (1), 162–179.
- Cohen, J. (1992). A power primer. *Psychological Bulletin*, 112 (1), 155–159.
<https://doi.org/10.1037/0033-2909.112.1.155>
- Collins, W. A., & Laursen, B. (2004). Parent-adolescent relationships and influences. In R.M. Lerner & L. Steinberg (Eds.), *Handbook of Adolescent Psychology*, (pp. 331–361). Hoboken: Wiley.
- Collins, J. M., & O'Rourke, C. M. (2010). Financial education and counseling—Still holding promise. *Journal of Consumer Affairs*, 44 (3), 483– 498.
- Côté, S. (2011). How social class shapes thoughts and actions in organizations. *Research in Organizational Behavior*, 31, 43 - 71.
- Council on Foreign Relations. (2021, April 13). *Is rising student debt harming the U.S. economy?*
<https://www.cfr.org/backgrounder/us-student-loan-debt-trends-economic-impact>
- Curran, M. A., Parrott, E., Ahn, S. Y., Serido, J., & Shim, S. (2018). Young adults' life outcomes and well-being: Perceived financial socialization from parents, the romantic partner, and young adults' own financial behaviors. *Journal of Family and Economic Issues*, 39 (3), 445–456.
<https://doi.org/10.1007/s10834-018-9572-9>
- Cutrín, O., Maneiro, L., Chowdhury, Y., Kulis, S. S., Marsiglia, F. F., & Gómez Fraguera, J. A. (2022). Longitudinal associations between parental support and parental knowledge on behavioral and emotional problems in adolescents. *Journal of Youth and Adolescence*, 51 (6), 1169–1180.
- Damian, L. E., Negru-Subtirica, O., Domocus, I. M., & Friedlmeier, M. (2020). Healthy financial behaviors and financial satisfaction in emerging adulthood: A parental socialization perspective. *Emerging Adulthood*, 8(6), 548–554.
- Danes, S. M. (1994). Parental perceptions of children's financial socialization. *Journal of Financial Counseling and Planning*, 5, 127–149.
- Danes, S. M., & Brewton, K. E. (2014). The role of learning context in high school students' financial knowledge and behavior acquisition. *Journal of Family and Economic Issues*, 35 (1), 81–94.
- Danes, S. M., & Yang, Y. (2014). Assessment of the use of theories within the Journal of Financial Counseling and Planning and the contribution of the family financial

- socialization conceptual model. *Journal of Financial Counseling and Planning*, 25 (1), 53–68.
- DeCoster, J., Iselin, A. M. R., & Gallucci, M. (2009). A conceptual and empirical examination of justifications for dichotomization. *Psychological Methods*, 14 (4), 349.
- De Goede, I. H., Branje, S. J., & Meeus, W. H. (2009). Developmental changes in adolescents' perceptions of relationships with their parents. *Journal of Youth and Adolescence*, 38, 75–88.
- DeMarco, L. M., Dwyer, R. E., & Haynie, D. L. (2021). The accumulation of disadvantage: Criminal justice contact, credit, and debt in the transition to adulthood. *Criminology*, 59 (3), 545–580.
- Despard, M. R., Friedline, T., & Martin-West, S. (2020). Why do households lack emergency savings? The role of financial capability. *Journal of Family and Economic Issues*, 41 (3), 542–557.
- Dew, J., & Xiao, J. J. (2011). The Financial Management Behavior Scale: Development and validation. *Journal of Financial Counseling and Planning*, 22 (1), 43–59.
- Dickler, J. (2022). 'Young adults are particularly vulnerable to delinquencies' — 1 in 5 have debt in collections, new report finds. CNBC.
<https://www.cnbc.com/2022/12/21/1-in-5-young-adults-have-debt-in-collections-report-finds.html>
- Drentea, P. (2000). Age, debt, and anxiety. *Journal of Health and Social Behavior*, 41 (4), 437–450.
- Drentea, P., & Lavrakas, P. J. (2000). Over the limit: The association among health, race and debt. *Social Science and Medicine*, 50 (4), 517–529.
- Drever, A. I., Odders-White, E., Kalish, C. W., Else-Quest, N. M., Hoagland, E. M., & Nelms, E. N. (2015). Foundations of financial well-being: Insights into the role of executive function, financial socialization, and experience-based learning in childhood and youth. *The Journal of Consumer Affairs*, 49(1), 13–38.
- Dwyer, R. E., Hodson, R., & McCloud, L. (2013). Gender, debt, and dropping out of college. *Gender & Society*, 27 (1), 30–55.
- Enders, C. K. (2010). *Applied missing data analysis*. Guilford Press.
- Enders, C. K. (2022). *Applied missing data analysis*. Guilford Press.
- Fan, L., & Chatterjee, S. (2019). Financial socialization, financial education, and student loan debt. *Journal of Family and Economic Issues*, 40 (1), 74–85.

- Federal Reserve Bank of St. Louis. (2018, March). Parents' wealth helps explain racial disparities in student loan debt. *In the Balance*, (19).
[https://www.stlouisfed.org/-/media/project/frbstl/stlouisfed/Publications/In-the-Balance/Images/Issue_19/ITB19_March_2018.pdf\[1\]](https://www.stlouisfed.org/-/media/project/frbstl/stlouisfed/Publications/In-the-Balance/Images/Issue_19/ITB19_March_2018.pdf[1]).
- Fernandes, D., Lynch, J. G., & Netemeyer, R. G. (2014). Financial literacy, financial education, and downstream financial behaviors. *Management Science*, 60 (8), 1861–1883.
- Fan, L., & Chatterjee, S. (2019). Financial socialization, financial education, and student loan debt. *Journal of Family and Economic Issues*, 40 (1), 74–85.
- Fan L, Lim H, Lee JM (2022) Young adults' financial advice-seeking behavior: the roles of parental financial socialization. *Family Relations* 71 (3), 1226–1246.
- Fishbein, M., & Ajzen, I. (2010). *Predicting and changing behavior: The reasoned action approach*. Psychology Press.
- Fletcher, M., & Wright, R. (2024). Sowing seeds: the impact of financial socialization on the financial understanding of young children and preschoolers. *The Journal of Consumer Affairs*. Advance online publication.
<https://doi.org/10.1111/joca.12593>
- Flouri, E. (2004). Exploring the relationship between mothers' and fathers' parenting practices and children's materialist values. *Journal of Economic Psychology*, 25, 743–752.
- Friedline, T., & West, S. (2016). Financial education is not enough: Millennials may need financial capability to demonstrate healthier financial behaviors. *Journal of Family and Economic Issues*, 37 (4), 649–671.
- Friedline, T., West, S., Rosell, N., Serido, J., & Shim, S. (2017). Do community characteristics relate to young adult college students' credit card debt? The hypothesized role of collective institutional efficacy. *American journal of community psychology*, 59 (1–2), 80–93.
- Frisancho, V. (2023). Is school-based financial education effective? Immediate and long-lasting impacts on high school students. *The Economic Journal*, 133(651), 1147–1180.
- Frost, J. (2023). *Log transformation of variables including handling zero values*. statistics by Jim. <http://www.statisticsbyjim.com>
- Fry, R. (2020, May 30). *Young adults, student debt and economic well-being*. Pew Research Center's Social & Demographic Trends Project.
<https://www.pewresearch.org/social-trends/2014/05/14/young-adults-student-debt-and-economic-well-being/>
- Gauly, B. (2017). The intergenerational transmission of attitudes: Analyzing time preferences

- and reciprocity. *Journal of Family and Economic Issues*, 38 (2), 293–312. <https://doi.org/10.1007/s10834-016-9513-4>
- Geiman, J., & Taylor, A. S. (2022, June). *Disproportionately impacted: Closing the racial wealth gap through student loan cancellation, payment reforms, and investment in college affordability*. ERIC–Education Resources Information Center. <https://files.eric.ed.gov/fulltext/ED621932.pdf>
- Gill, A., & Bhattacharya, R. (2019). The interaction of financial attitudes and financial knowledge: Evidence for low-income Hispanic families. *Atlantic Economic Journal*, 47 (4), 497–510.
- Goodwin, J. (2012). *Sage secondary data analysis*. Sage Publications. <https://doi.org/10.4135/9781473963702>
- Goyal, A., Kumar, A., & Rani, A. (2021). Antecedents to personal financial management behavior: A systematic literature review. *International Journal of Bank Marketing*, 39 (7), 1166–1207.
- Goyal, K., & Kumar, S. (2021). Financial literacy: A systematic review and bibliometric analysis. *International Journal of Consumer Studies*, 45 (1), 80–105.
- Graham, J. W. (2009). Missing data analysis: Making it work in the real world. *Annual Review of Psychology*, 60, 549–576. <https://doi.org/10.1146/annurev.psych.58.110405.085530>
- Greenberg, A. E., & Hershfield, H. E. (2019). Financial decision making. *Consumer Psychology Review*, 2(1), 17–29.
- Grinstein-Weiss, M., Spader, J., Yeo, Y.H., Taylor, A., and Freeze, E. (2011). Parental transfer of financial knowledge and later credit outcomes among low and moderate-income homeowners. *Children and Youth Services Review*, 33, 78–85. <http://doi.org/10.1016/j.childyouth.2010.08.015>
- Grohmann, A., Kouwenberg, R., & Menkhoff, L. (2015). Childhood roots of financial literacy. *Journal of Economic Psychology*, 51, 114–133.
- Gudmunson, C. G., & Danes, S. M. (2011). Family financial socialization: Theory and critical review. *Journal of Family and Economic Issues*, 32 (4), 644–667.
- Gutter, M., & Copur, Z. (2011). Financial behaviors and financial well-being of college students: Evidence from a national survey. *Journal of Family and Economic Issues*, 32, 699–714. <https://doi.org/10.1007/s10834-011-9255-2>

- Gutter, M., Copur, Z., & Garrison, S. (2010). Social learning opportunities and the financial behaviors of college students. *Family and Consumer Sciences Research Journal*, 38 (4), 387–404
- Halpern-Meekin, S., Greene, S. S., Levin, E., & Edin, K. (2018). The rainy day earned income tax credit: A reform to boost financial security by helping low-wage workers build emergency savings. *RSF: The Russell Sage Foundation Journal of the Social Sciences*, 4 (2), 161–176.
- Han, J., Chu, X., Song, H., & Li, Y. (2015). Social capital, socioeconomic status and self-efficacy. *Applied Economics and Finance*, 2 (1), 1–10.
- Hancock, A., Jorgensen, B., and Swanson, M. (2013). College students and credit Card use: The role of parents, work experience, financial knowledge, and credit card attitudes. *Journal of Family and Economic Issues*, 34, 369–381.
<http://doi.org/10.1007/s10834-012-9338-8>
- Henrich, J., Heine, S. J., & Norenzayan, A. (2010). The weirdest people in the world? *Behavioral and Brain Sciences*, 33 (2–3), 61–83.
- Highhouse, S., Nye, C.D., Zhang, D.C., Rada, T.B., (2017). Structure of the Dospert: Is there evidence for a general risk factor? *Journal of Behavioral Decision Making*, 30(2), 400–406.
- Hoeve, M., Stams, G. J. J., van der Zouwen, M., Vergeer, M., Jurrius, K., & Asscher, J. J. (2014). A systematic review of financial debt in adolescents and young adults: Prevalence, correlates, and associations with crime. *PloS one*, 9 (8).
- Hoeve, M., Jak, S., Stams, G. J. J., & Meeus, W. H. (2016). Financial problems and delinquency in adolescents and young adults: A 6-year three-wave study. *Crime and Delinquency*, 62 (11), 1488–1509.
- Holmes, A. (2004). *Smart risk*. John Wiley & Sons.
- Horner, S. H., Solheim, C. A., Zuiker, V. S., & Ballard, J. (2016). The link between childhood overindulgence and adult financial behaviors. *Journal of Financial Counseling and Planning*, 27 (1), 80–91.
<https://doi.org/10.1891/1052-3073.27.1.80>
- Houle, J. N. (2014). Disparities in debt: Parents' socioeconomic resources and young adult student loan debt. *Sociology of education*, 87 (1), 53–69.
- Houle, J. N., & Addo, F. R. (2019). Racial Disparities in student debt and the reproduction of the fragile Black middle class. *Sociology of Race and Ethnicity*, 5 (4), 562–577.
<https://doi.org/10.1177/2332649218790989>

- Huston, S. J. (2010). Measuring financial literacy. *The Journal of Consumer Affairs*, 44(2), 296–316.
- Hyndman, R. J., & Koehler, A. B. (2006). Another look at measures of forecast accuracy. *International Journal of Forecasting*, 22 (4), 679–688.
- James, G., Witten, D., Hastie, T., & Tibshirani, R. (2013). An introduction to statistical learning with applications in R. Springer.
- Jogdand, S. S., & Naik, J. D. (2014). Study of family factors in association with behavior problems amongst children of 6-18 years age group. *International Journal of Applied and Basic Medical Research*, 4 (2), 86–100.
- Johnston, M. P. (2014). Secondary data analysis: A method of which the time has come. *Qualitative and Quantitative Methods in Libraries*, 3 (3), 619–626.
- Jones, A., & Robinson, E. (2017). The longitudinal associations between perceived descriptive peer norms and eating and drinking behavior: an initial examination in young adults. *Frontiers in Psychology*, 8, 207–354.
- Jorgensen B.L., & Savla, J. (2010). Financial literacy of young adults: the importance of parental socialization. *Family Relations*, 59 (4), 465–478.
- Jorgensen, B. L., Savla, J., Gudmunson, C. G., Danes, S. M., & Schramm, D. G. (2017). The financial behavior of emerging adults: A family financial socialization approach. *Journal of Family and Economic Issues*, 38 (1), 57–69.
<https://doi.org/10.1007/s10834-015-9481-0>
- Jorgensen B.L., Rappleyea, D.L., Schweichler, J.T., Fang, X., Moran, M.E. (2017). The financial behavior of emerging adults: A family financial socialization approach. *Journal of Family and Economic Issues*, 38, 57–69
- Josef, A. K., Richter, D., Samanez-Larkin, G. R., Wagner, G. G., Hertwig, R., & Mata, R. (2016). Stability and change in risk-taking propensity across the adult life span. *Journal of Personality and Social Psychology*, 111 (3), 430–450.
- Juster, F. T., Cao, H., Perry, M., & Couper, M. (2007). The effect of unfolding brackets on the quality of wealth data in HRS. *University of Michigan Retirement Research Center Working Paper*, 2007–151.
- Kaiser, T., & Menkhoff, L. (2017). Does financial education impact financial literacy and financial behavior, and if so, when?. *The World Bank Economic Review*, 31 (3), 611–630.
- Kiecolt, K. J., & Nathan, L. E. (1985). Secondary analysis of survey data. *Sage University Paper Series on Quantitative Applications in the Social Sciences*.
https://courses.washington.edu/scdrydta/Kiecolt_Nathan_1985.pdf

- Kim, J., LaTaillade, J., & Kim, H. (2011). Family processes and adolescents' financial behaviors. *Journal of Family and Economic Issues*, 32 (4), 668–679.
<https://doi.org/10.1007/s10834-011-9270-3>
- Kim, J., and Chatterjee, S. (2013). Childhood financial socialization and young adults' financial management. *Journal of Financial Counseling and Planning*, 24 (1), 61–80.
- Kim, K. T., Wilmarth, M. J., & Henager, R. (2017). Poverty levels and debt indicators among low-income households before and after the Great Recession. *Journal of Financial Counseling and Planning*, 28 (2), 196–212.
- Kim, J. H., & Torquati, J. (2019). Financial socialization of college students: Domain-general and domain-specific perspectives. *Journal of Family and Economic Issues*, 40 (2), 226–236.
- Kim, J., & Chatterjee, S. (2013). Childhood financial socialization and young adults' financial management. *Journal of Financial Counseling and Planning*, 24 (1), 61–79.
- Kim, J., & Chatterjee, S. (2021). Financial debt and mental health of young adults. *Journal of Financial Counseling and Planning*, 32 (2), 187–201.
- Kim, J. H., & Torquati, J. (2021). Are you close with your parents? The mediation effects of parent–child closeness on young adults' financial socialization through young adults' self-reported responsibility. *Journal of Family and Economic Issues*, 42 (2), 314–324.
- King, V., Boyd, L. M., & Pragg, B. (2018). Parent–adolescent closeness, family belonging, and adolescent well-being across family structures. *Journal of Family Issues*, 39 (7), 2007–2036.
- Kish-Gephart, J. J., & Campbell, J. T. (2015). You don't forget your roots: The influence of CEO social class background on strategic risk taking. *Academy of Management Journal*, 58 (6), 1614–1636.
- Kline, R. B. (2016). *Principles and practice of structural equation modeling*. Guilford Publications.
- Kochhar, R., & Moslimani, M. (2024, January 17). Wealth surged in the pandemic, but debt endures for poorer Black and Hispanic families. *Pew Research Center Race & Ethnicity*.
<https://www.pewresearch.org/race-ethnicity/2023/12/04/wealth-surged-in-the-pandemic-but-debt-endures-for-poorer-black-and-hispanic-families/>
- Kohavi, R. (1995). A study of cross-validation and bootstrap for accuracy estimation and model selection. *Proceedings of the 14th International Joint Conference on Artificial Intelligence*, 2, 1137–1143.

- Kowalski, R., Strzelecka, A., Wałęga, A., & Wałęga, G. (2023). Do children matter to the household debt burden?. *Journal of Family and Economic Issues*, 44 (4), 1007–1022.
- Kozubíková, L., Dvorský, J., Cepel, M., & Balcerzak, A. P. (2017). Important characteristics of an entrepreneur in relation to risk taking: Czech Republic case study. *Journal of International Studies*, 10(3), 220–233. <https://doi.org/10.14254/2071-8330.2017/10-3/16>
- Krueger Jr, N., & Dickson, P. R. (1994). How believing in ourselves increases risk taking: Perceived self-efficacy and opportunity recognition. *Decision sciences*, 25 (3), 385–400.
- Kuczynski, L., Parkin, C. M., & Pitman, R. (2015). Socialization as dynamic process: A dialectical, transactional perspective. In J. E. Grusec & P. D. Hastings (Eds.), *Handbook of socialization: Theory and research* (2nd ed., pp. 135–157). The Guilford Press.
- Kuhnén, C. M., & Melzer, B. T. (2018). Noncognitive abilities and financial delinquency: The role of self-efficacy in avoiding financial distress. *The Journal of Finance*, 73 (6), 2837–2869.
- Lea, S. E. (2021). Debt and overindebtedness: Psychological evidence and its policy implications. *Social Issues and Policy Review*, 15 (1), 146–179.
- LeBaron-Black, A. B., Curran, M. A., Hill, E. J., Freeh, M. E., Toomey, R. B., & Speirs, K. E. (2022). Talk is cheap: Parent financial socialization and emerging adult financial wellbeing. *Family Relations*. <https://doi.org/10.1111/fare.12751>
- LeBaron, A. B., Hill, E. J., Rosa, C. M., & Marks, L. D. (2018). Whats and hows of family financial socialization: Retrospective reports of emerging adults, parents, and grandparents. *Family Relations*, 67 (4), 497–509.
- LeBaron, A. B., Marks, L. D., Rosa, C. M., & Hill, E. J. (2020). Can we talk about money? Financial socialization through parent–child financial discussion. *Emerging Adulthood*, 8 (6), 453–463.
- LeBaron, A. B., & Kelley, H. H. (2021). Financial socialization: A decade in review. *Journal of Family and Economic Issues*, 42 (1), 195–206.
- LeBaron, A. B., Rosa-Holyoak, C. M., Bryce, L. A., Hill, E. J., & Marks, L. D. (2019). Teaching children about money: Prospective parenting ideas from undergraduate students. *Journal of Financial Counseling and Planning*, 29 (2), 259–271
- Letkiewicz, J. C., & Heckman, S. J. (2019). Repeated payment delinquency among young adults in the United States. *International Journal of Consumer Studies*, 43 (5), 417–428.
- Little, R. J., & Rubin, D. B. (2002). *Statistical Analysis with Missing Data*. John Wiley & Sons.
- Livingstone, S. M., & Lunt, P. K. (1992). Predicting personal debt and debt repayment:

- Psychological, social and economic determinants. *Journal of Economic Psychology*, 13 (1), 111–134.
- Loke, V., Choi, L., & Libby, M. (2015). Increasing youth financial capability: An evaluation of the MyPath savings initiative. *Journal of Consumer Affairs*, 49 (1), 97–126.
- Lyons, A. C. (2004). A profile of financially at-risk college students. *Journal of Consumer Affairs*, 38 (1), 56–80.
- Luhr, S. (2018). How social class shapes adolescent financial socialization: Understanding differences in the transition to adulthood. *Journal of Family and Economic Issues*, 39 (3), 457–473.
- Lusardi, A., & Tufano, P. (2015). Debt literacy, financial experiences, and overindebtedness. *Journal of Pension Economics & Finance*, 14 (4), 332–368.
- Lusardi, A. (2019). Financial literacy and the need for financial education: evidence and implications. *Swiss Journal of Economics and Statistics*, 155 (1), 1–8.
- MacCallum, R. C., Zhang, S., Preacher, K. J., & Rucker, D. D. (2002). On the practice of dichotomization of quantitative variables. *Psychological Methods*, 7 (1), 19.
- MacKinnon, D. P., Lockwood, C. M., & Williams, J. (2004). Confidence limits for the indirect effect: Distribution of the product and resampling methods. *Multivariate Behavioral Research*, 39 (1), 99–128.
- MacNeill, L. A., Zvara, B. J., & Anderson, S. E. (2024). Association between maternal closeness with parents and mother–toddler relationship quality. *Family Relations*, 73 (2), 645–660.
- Mamerow, L., Frey, R., & Mata, R. (2016). Risk taking across the life span: A comparison of self-report and behavioral measures of risk taking. *Psychology and Aging*, 31 (7), 711–741.
- Manning, M. (2009). The effects of subjective norms on behavior in the theory of planned behavior: A meta-analysis. *British Journal of Social Psychology*, 48 (4), 649–705.
- Martincheck, K. (2024, February 12). *Young adults are feeling Covid-19 recessions effect three years later especially*. Urban Institute. <https://www.urban.org/urban-wire/young-adults-are-feeling-covid-19-recessions-effects-three-years-later-especially>
- Martincheck, K., Andre, J., & Santillo, M. (2022, December 13). What Can Policymakers Do to Help Young Adults Cope with Debt?. *Urban Institute*. <https://www.urban.org/research/publication/what-can-policymakers-do-help-young-adults-cope-debt>
- Mayer, S. E., & Lopoo, L. M. (2005). Has the intergenerational transmission of economic status changed?. *Journal of Human Resources*, 40 (1), 169–185.

- Maxwell, S. E., Delaney, H. D., & Kelley, K. (2017). *Designing experiments and analyzing data: A model comparison perspective*. Routledge.
- McCartney, K., & Rosenthal, R. (2000). Effect size, practical importance, and social policy for children. *Child Development*, 71 (1), 173–180.
- Menard, S. W. (2002). *Longitudinal research* (Vol. 76). Sage Publication.
- Mishra, S., & Lalumière, M. L. (2011). Individual differences in risk-propensity: Associations between personality and behavioral measures of risk. *Personality and Individual Differences*, 50 (6), 869–873.
- Nepomnyaschy, L., Dwyer Emory, A., Eickmeyer, K. J., Waller, M. R., & Miller, D. P. (2021). Parental debt and child well-being: What type of debt matters for child outcomes? *RSF: The Russell Sage Foundation Journal of the Social Sciences*, 7 (3), 122–151.
<https://doi.org/10.7758/RSF.2021.7.3.06>
- Pak, T.Y., Fan, L., & Chatterjee, S. (2023). Financial socialization and financial well-being in early adulthood: The mediating role of financial capability. *Family Relations*, 1–22.
<https://doi.org/10.1111/fare.12959>
- Pearl, J. (2009). *Causality: Models, reasoning, and inference* (2nd ed.). Cambridge University Press.
- Popov, L.M., & Ilesanmi, R.A. (2015). Parent-Child Relationship: Peculiarities and Outcome. *Review of European Studies*, 7, 253–275.
- Rakshit, S., Rae, M., Claxton, G., Amin, K., & Cox, C. (2024, February 12). *The burden of medical debt in the United States*. Peterson Center on healthcare-KFF <https://www.healthsystemtracker.org/brief/the-burden-of-medical-debt-in-the-united-states/#Share%20of%20adults%20who%20have%20medical%20debt,%20by%20health%20status%20and%20disability%20status,%202021>
- Ravert, R. D., & Donnellan, M. B. (2021). Impulsivity and sensation seeking: Differing associations with psychological well-being. *Applied Research in Quality of Life*, 16(4), 1503–1515.
- Roberts, W. L. (1986). Nonlinear models of development: An example from the socialization of competence. *Child Development*, 1166–1178.
- Ross, D. B., Coombs, E., & Johnson, E. (2022). Trauma of the past: The impact of adverse childhood experiences on adult attachment, money beliefs and behaviors, and financial transparency. *Journal of Financial Therapy*, 13 (1), 4.
- Rudi, J. H., Serido, J., & Shim, S. (2020). Unidirectional and bidirectional relationships between financial parenting and financial self-efficacy: Does student loan status matter?. *Journal of Family Psychology*, 34 (8), 949–965.

- Salas-Rodríguez, J., Gómez-Jacinto, L., Hombrados-Mendieta, I., & del Pino-Brunet, N. (2022). Applying an evolutionary approach of risk-taking behaviors in adolescents. *Frontiers in Psychology*, 12, 1–15.
- Sanchez, J., & Wilkinson, O. (2023, August 14). Deja Vu? *The recent rise in credit card debt delinquencies*. Federal Reserve Bank St Louis.
<https://www.stlouisfed.org/publications/regional-economist/2023/aug/deja-vu-recent-rise-credit-card-debt-delinquencies>
- Schafer, J. L., & Graham, J. W. (2002). Missing data: Our view of the state of the art. *Psychological Methods*, 7 (2), 147–177.
- Schoppe-Sullivan, S. J., Kotila, L. E., Jia, R., Lang, S. N., & Bower, D. J. (2013). Comparisons of levels and predictors of mothers' and fathers' engagement with their preschool-aged children. *Early Child Development and Care*, 183 (34), 498–514.
- Serido, J., Shim, S., Mishra, A., & Tang, C. (2010). Financial parenting, financial coping behaviors, and well-being of emerging adults. *Family Relations*, 59 (4), 453–464.
- Serido, J., & Deenanath, V. (2016). Financial parenting: Promoting financial self-reliance of young consumers. In J. J. Xiao (Ed.). *Handbook of consumer finance research* (2nd ed., pp. 291–300). Springer. https://doi.org/10.1007/978-3-319-28887-1_24
- Sheeran, P., & Webb, T. L. (2016). The intention–behavior gap. *Social and Personality Psychology Compass*, 10 (9), 503–518.
<https://doi.org/10.1111/spc3.12265>
- Sherraden, M. S., Johnson, L., Guo, B., & Elliott, W. (2011). Financial capability in children: Effects of participation in a school-based financial education and savings program. *Journal of Family and Economic Issues*, 32, 385–399.
- Shim, S., Barber, B. L., Card, N. A., Xiao, J. J., & Serido, J. (2010). Financial socialization of first-year college students: The roles of parents, work, and education. *Journal of Youth and Adolescence*, 39 (12), 1457–1470.
- Shim, S., Serido, J., & Tang, C. (2012). The ant and the grasshopper revisited: The present psychological benefits of saving and future oriented financial behaviors. *Journal of Economic Psychology*, 33 (1), 155–165.
- Shim, S., Sorgente, A., Lanz, M., & Serido, J. (2023). Examining the Effects of Personal and Sociodemographic Factors on Family Financial Socialization Process. *European Journal of Psychology Open*, 82 (A), 434–434.
- Shrout, P. E., & Bolger, N. (2002). Mediation in experimental and nonexperimental studies: New procedures and recommendations. *Psychological Methods*, 7 (4), 422–445.

- Steinberg, L. (2007). Risk taking in adolescence: New perspectives from brain and behavioral science. *Current Directions in Psychological Science*, 16 (2), 55–59.
- Szrek H., Chao L.W., Ramlagan, S., Peltzer, K. (2012). Predicting (un)healthy behavior: A comparison of risk-taking propensity measures. *Judgment and Decision Making*, 7 (6), 716–727.
- Tach, L. M., & Greene, S. S. (2014). “Robbing Peter to pay Paul”: Economic and cultural explanations for how lower-income families manage debt. *Social Problems*, 61 (1), 1–21.
- Tang, N. (2017). Like father like son: how does parents’ financial behavior affect their children’s financial behavior?. *Journal of Consumer Affairs*, 51 (2), 284–311.
- Taylor, E. W., Tisdell, E. J., & Forté, K. S. (2012). Teaching financial literacy: A survey of community-based educators. *International Journal of Consumer Studies*, 36 (5), 531–538.
- Teo, T. (2010). Examining the influence of subjective norm and facilitating conditions on the intention to use technology among pre-service teachers: a structural equation modeling of an extended technology acceptance model. *Asia Pacific Education Review*, 11, 253–262.
- Tharayil, A. (2024). Examining the association between financial education and financial risk tolerance. *The American Economist*, 69 (1), 59–79.
- Trevordelaney. (2023, August 24). Younger borrowers are struggling with credit card and auto loan payments. *Liberty Street Economics*.
<https://libertystreeteconomics.newyorkfed.org/2023/02/younger-borrowers-are-struggling-with-credit-card-and-auto-loan-payments/>
- Van Campenhout, G. (2015). Revaluing the role of parents as financial socialization agents in youth financial literacy programs. *Journal of Consumer Affairs*, 49(1), 186–222.
<https://doi.org/10.1111/joca.12064>
- VanVoorhis, C. W., & Morgan, B. L. (2007). Understanding power and rules of thumb for determining sample sizes. *Tutorials in Quantitative Methods for Psychology*, 3 (2), 43–50.
<https://doi.org/10.20982/tqmp.03.2.p043>
- Vosylis, R., & Erentaitė, R. (2020). Linking family financial socialization with its proximal and distal outcomes: Which socialization dimensions matter most for emerging adults’ financial identity, financial behaviors, and financial anxiety? *Emerging Adulthood*, 8 (6), 464–475. <https://doi.org/10.1177/2167696819856763>
- Walker, C. M. (1996). Financial management, coping and debt in households under financial strain. *Journal of Economic Psychology*, 17 (6), 789–807.

- Wasserman, A. M., Mathias, C. W., Hill-Kapturczak, N., Karns-Wright, T. E., & Dougherty, D. M. (2020). The development of impulsivity and sensation seeking: Associations with substance use among at-risk adolescents. *Journal of Research on Adolescence*, 30 (4), 1051–1066.
- Webley, P., & Nyhus, E. K. (2006). Parents' influence on children's future orientation and saving. *Journal of Economic Psychology*, 27 (1), 140–164.
- White, K. M., Terry, D. J., & Hogg, M. A. (1994). Safer sex behavior: The role of attitudes, norms, and control factors. *Journal of Applied Social Psychology*, 24 (24), 2164–2192.
- Xiao, J. J. (2008). Applying behavior theories to financial behavior. In *handbook of consumer finance research* (pp. 69–81). Springer.
- Xiao, J. J., Tang, C., Serido, J., & Shim, S. (2011). Antecedents and consequences of risky credit behavior among college students: Application and extension of the theory of planned behavior. *Journal of Public Policy and Marketing*, 30, 239–245.
<https://doi.org/10.2307/23209278>
- Xiao, J. J., Tang, C., Serido, J., & Shim, S. (2011). Antecedents and consequences of risky credit behavior among college students: Application and extension of the theory of planned behavior. *Journal of Public Policy and Marketing*, 30 (2), 239–245.
- Xiao, J. J., Chatterjee, S., & Kim, J. (2014). Factors associated with perceived financial independence of young adults. *International Journal of Consumer Studies*, 38, 394–403.
- Xiao, J. J., & O'Neill, B. (2016). Consumer financial education and financial capability. *International Journal of Consumer Studies*, 40 (6), 712–721.
- Xiao, J. J., & Yao, R. (2022). Good debt, bad debt: family debt portfolios and financial burdens. *International Journal of Bank Marketing*, 40 (4), 659–678.
- Xiao, J. J., & Kim, K. T. (2022). The able worry more? Debt delinquency, financial capability, and financial stress. *Journal of Family and Economic Issues*, 43(1), 138–152.
- Yeung, W. J., Linver, M. R., & Brooks-Gunn, J. (2002). How money matters for young children's development: Parental investment and family processes. *Child development*, 73 (6), 1861–1879.
- Zhao, H., & Zhang, L. (2020). Talking money at home: the value of family financial socialization. *International Journal of Bank Marketing*, 38(7), 1617–1634.
- Zimmerman, L., Canale, A., Britt, S. L., & Seay, M. (2015). The theory of planned behavior and the earned income tax credit. *Journal of Financial Therapy*, 6 (1), 44–63

Appendix A - Evaluation of Number of Dependents as a Covariate

Logistic Regression Analysis

The logistic regression analysis was conducted to determine if the number of children is associated with financial delinquency, controlling for race.

Table 1: Logistic Regression Results

delinquency_binary	Coefficient	Std. err.	z	P> z	[95% conf. interval]	
children						
2	.6368767	.4060385	1.57	0.117	-.1589441	1.432698
3	0 (empty)					
ya_race						
Black	.0083133	.3284451	0.03	0.980	-.6354273	.6520539
Other	.3995871	.3467231	1.15	0.249	-.2799776	1.079152
_cons	-.8423445	.2769457	-3.04	0.002	-1.385148	-.2995409

Note: N = 293

Results

The logistic regression results indicate that the number of children does not significantly predict financial delinquency when controlling for race. The coefficients for having two children and being of Black individuals or Other (Non Black/Non Hispanic) race category are not statistically significant at the 0.05 level. The omitted category for three children indicates a perfect prediction of failure, resulting in its exclusion from the analysis.

Chi-Square Tests

The chi-square tests were performed to evaluate the association between the number of children, race, and financial delinquency.

Table 2: Bi-variate Analysis for Children and Race

Number of Children	Hispanic	Black	Other	Total
1	56	120	89	265
2	7	17	4	28
3	1	3	0	4
Total	64	140	93	297

Note: $\chi^2(4) = 6.42$, $p < .169$.

Table 3: Bi-variate Analysis for Children and Delinquency

Number of Children	No Delinquency	Delinquency	Total
1	177	88	265
2	15	13	28
3	4	0	4
Total	196	101	297

Note: $\chi^2(2) = 4.06$, $p < .131$.

Results

The chi-square test for the association between the number of children and race was not significant ($\chi^2(4) = 6.427$, $p = 0.169$), indicating that the number of children does not vary significantly by race (see Table 2). The chi-square test for the association between the number of children and financial delinquency was not significant ($\chi^2(2) = 4.062$, $p = 0.131$), indicating that the number of children is not associated with financial delinquency (see Table 3).

Appendix B - Path Analysis Results

Hypotheses	Path	Standard Coefficient (β)	Standard Error (SE)	p-value	95% Confidence Interval	
					Lower	Upper
	Direct Effects					
H1	PCR → PFC	-0.056	0.032	0.080	-0.120	-0.006
	PCR → Delinquency	0.011	0.038	0.768	-0.062	0.085
H3	PSES → Risky	0.121	0.031	***	0.058	0.182
H4	Risky → Delinquency	-0.083	0.025	***	-0.133	-0.034
	PSES → Delinquency	0.087	0.019	***	-0.125	-0.050
H6	PSES → Norms	-0.081	0.023	***	-0.128	-0.034
H7	Norms → Delinquency	0.101	0.021	***	0.060	0.141
	PSES → Delinquency	-0.087	0.019	***	0.050	0.123
H9	PSES → PFC	0.087	0.018	***	0.051	0.124
H10	PFC → Delinquency	-0.300	0.018	***	-0.337	-0.263
	PSES → Delinquency	-0.068	0.019	***	-0.104	-0.031
	Indirect Effects					
H2	PCR → PFC → Delinquency	0.009	0.005	0.070	-0.001	0.019
H5	PSES → Risky → Delinquency	-0.001	0.001	*	-0.003	-0.001
H8	PSES → Norms → Delinquency	-0.001	0.001	*	-0.002	-0.001
H11	PSES → PFC → Delinquency	-0.003	0.002	***	-0.004	-0.001

Notes:

- **PCR:** Parent-Child Relationship.
- **PSES:** Parental Socioeconomic Status
- **Risky:** Risky Attitude
- **Norms:** Parental Debt Norms
- **PFC:** Perceived Financial Control.
- **Delinquency:** Financial Debt Delinquency Behaviors.
- **95% Confidence Interval:** The confidence interval for the coefficient, indicating the range within which the true population parameter likely falls.
- **p-values:** *** $p < .001$; ** $p < .01$; * $p < .05$.

Appendix C - Summary of Hypotheses Testing

Hypotheses	Relationship	Result
H1	Parent Child Relationship and Perceived Financial Control	Not supported
H2	Mediation effect of Perceived Financial Control between Parent Child Relationship and Financial Debt Delinquency Behaviors	Supported
H3	Parental Socioeconomic Status and Risky Attitude	Supported
H4	Risky Attitude and Financial Debt Delinquency Behaviors	Supported
H5	Mediation effect of Perceived Financial Control between Parent Child Relationship and Financial Debt Delinquency Behaviors	Supported
H6	Parental Socioeconomic Status and Parental Debt Norms	Supported
H7	Parental Debt Norms and Financial Debt Delinquency Behaviors	Supported
H8	Mediation effect of Perceived Financial Control between Parent Child Relationship and Financial Debt Delinquency Behaviors	Supported
H9	Parental Socioeconomic Status and Perceived Financial Control	Supported
H10	Perceived Financial Control and Financial Debt Delinquency Behaviors	Supported
H11	Mediation effect of Perceived Financial Control between Parent Child Relationship and Financial Debt Delinquency Behaviors	Supported

Appendix D - Effect Size Calculation for Risky Attitude, Parental Debt Norms, Perceived Financial Control on Average Debt Delinquency Score

I. Effect size calculation of Risky Attitude

- Path coefficient (β) = -0.083
- Mean of debt delinquency score: 0.30
- Standard deviation of debt delinquency score: 0.76
- Mean of risky attitude = 2.53
- Standard deviation of risky attitude ($SD_{\text{risky attitude}}$) = 0.82
- Standardized coefficient: $-0.083 \times \frac{0.82}{0.76} = -0.0895$
- Percentage change in the average debt delinquency score:
 $-0.0895 \times 0.76 \times \frac{1}{0.30} \times 100 = -22.67\%$

II. Effect size calculation of Parental Debt Norms

- Path coefficient (β) = 0.101
- Mean of debt delinquency score: 0.30
- Standard deviation of debt delinquency score: 0.76
- Mean of parental debt norms = 0.60
- Standard deviation of parental debt norms ($SD_{\text{parental debt norms}}$) = 0.85
- Standardized coefficient: $0.101 \times \frac{0.85}{0.76} = 0.1139$
- Percentage change in the average debt delinquency score:
 $0.1139 \times 0.76 \times \frac{1}{0.30} \times 100 = 28.83\%$

III. Effect size calculation of Perceived Financial Control

- Path coefficient (β) = -0.300
- Mean of debt delinquency score: 0.30
- Standard deviation of debt delinquency score: 0.76
- Mean of perceived financial control: 10.87
- Standard deviation of perceived financial control ($SD_{\text{perceived financial control}}$): 2.30

- Standardized coefficient: $-0.300 \times \frac{2.30}{0.76} = -0.9078$
- Percentage change in the average debt delinquency score:
 $-0.9078 \times 0.76 \times \frac{1}{0.30} \times 100 = -229.91\%$

IV. Calculation of a 10% increase in parental socioeconomic status

- Initial parental socioeconomic status = \$50,000
- New parental socioeconomic status after 10% increase = \$55,000
- Increase = \$5,000

Effect on parental debt norms

- Mean parental socioeconomic status = \$52,883 (See Table 2: Summary Statistics)
- Standard deviation of parental income = \$59,104
- Coefficient for parental income to parental debt norms = -0.081
- Calculate the z-score for the increase: $z = \left(\frac{\text{Increase in income}}{SD_{\text{parental debt norms}}} \right) \times 100$
- $Z = \left(\frac{5000}{59104} \right) \approx 0.0846$
- Effect size on parental debt norms: $\beta \times Z = -0.081 \times 0.0846 \approx -0.00685$

Appendix E - Survey Questions on Main Variables

Created variables	Original survey questions	Survey	Survey year
YA Fin Debt Delinquency in 2012	During the last 12 months, have R or R's spouse or partner experienced any of the following? (yes/no)	NLSCYA	2012
	-Had an account sent to a collection agency;		
	-Had something repossessed;		
	-Filed for bankruptcy;		
	-Foreclosure of a property you owned or were renting.		
	During the last 12 months, have R or R's spouse or partner been late more than 60 days on any of the following types of payments? (yes/no)	NLSCYA	2012
	-Your mortgage or rent;		
	-Your utility bills;		
	-Your credit card bills;		
	-Your car payment;		
	-Other kinds of loans;		
	-Other bills.		
YA Perceived Financial Control	1.During the past 12 months, how much difficulty did you/your household have paying bills? (no difficulty at all/a little difficulty/some difficulty/quite a bit of difficulty/a great deal of difficulty)	NLSCYA	2012
	2.Thinking about the end of each month over the past 12 months, did you or your household generally end up with more than enough money left over, or some money left over, or just enough to make ends meet, or not enough to make ends meet?	NLSCYA	2012
	3.How often do you delay buying necessary purchases due to financial constraints?(never/rarely/occasionally/frequently/all the time)	NLSCYA	2012
Parental Debt Norms	1.Supposed you and your spouse/partner were to sell all of your major possession including your home, turn all of your investments and other assets into cash, and pay all of your debts. Would you have something left over/break even/be in debt)	NLSY79	2004
	2.On how many credit cards do you or your spouse/partner owe the maximum amount allowed by the credit card company?	NLSY79	2004
	3.In the last 5 years, have you completely missed a payment or been at least 2 months late in paying any of your bills? (yes/no)	NLSY79	2004
	4. Have you/spouse/partner ever declare bankruptcy?(yes/no)	NLSY79	2004

Created variables	Original survey questions	Survey	Survey year
Adolescents' Risky Attitude	<i>Please indicate your reaction to each sentence by circling the appropriate number: - I enjoy taking risks. (strongly disagree/ disagree/ agree/strongly agree)</i>	NLSCYA	2004
Parent-child relationship	<i>1.How close do you feel to your mother/father/stepfather? (extremely close/quite close/fairly close/not very close)</i>	NLSCYA	2004
<i>Covariates</i>			
<i>Young adults</i>			
Age in 2012	<i>Age of young adult at date of interview</i>	NLSCYA	2012
Male	<i>Sex of child</i>	NLSCYA	2012
Race	<i>Mother's racial/ethnic cohort (Hispanic/Black/non-black, non-Hispanic)</i>	NLSY79	1979
Total household income in 2011	<i>1.During 2011, how much did you receive from wages, salary, commissions, or tips from all jobs before deductions for taxes or anything else? 2.During 2011, how much did your spouse/partner receive from wages, salary, commissions, or tips from all jobs before deductions for taxes or anything else? 3.How much did you receive from own farm or business after expenses in 2011? 4.How much did your spouse/partner receive from own farm or business after expenses in 2011? 5.What was the total amount of these (other) veterans benefit, worker's compensation, disability payments or payments from social security R or R's spouse or partner received during 2011?</i>	NLSCYA	2012
Married in 2012	<i>Official marital status (never married/married/separated/divorced/widowed)</i>	NLSCYA	2012
Highest grade completed in 2012	<i>Highest grade completed by respondent as of the 2012 interview</i>	NLSCYA	2012
Employment Status			
Emergency Savings	<i>Employment status at time of interview (yes/no) Has R/spouse/partner set side emergency funds that would cover 3 months of expense? (yes/no)?</i>	NLSCYA	2012

Created variables	Original survey questions	Survey	Survey year
Parents			
Total income of household of mother in 2011	1. Not counting any money you received from your military service, during 2011, how much did you receive from wages, salary, commissions, or tips from all (other) jobs, before deductions for taxes or anything else? 2. Not counting any money received from military service, during 2011, how much did your spouse or partner receive from wages, salary, commissions, or tips from all (other) jobs, before deductions for taxes or anything else? 3. How much total income did you receive during 2011 from the military before taxes and other deductions? Please include money received from special pays, allowances, and bonuses. 4. How much total income did your spouse or partner receive during 2011 from the military before taxes and other deductions? Please include money received from special pays, allowances, and bonuses. 5. How much did you receive after expenses [from your farms and businesses or professional practices]? 6. How much did your spouse receive after expenses [from farms and businesses or professional practices]? 7. How much did you or your spouse/partner receive per month during 2011 in (other) veteran's benefits? 8. How much did you or your spouse/partner receive per month during 2011 in these (other) disability payments? 9. How much did you or your spouse/partner receive per month during 2011 in these payments from Social Security?	NLSY79	2012

Note: "R" means "respondent". It represents child in NLSCYA and represents mother in NLSY79.