2023 Symposium Proceedings

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Accelerating a Financial Day Modernization

Troy Anthony Anderson, Suzanne Cooke, Crystal Terhune & Catherine Sorenson, University of Maryland Extension

Keywords: Economic stability, Extension, Family & Consumer Sciences (FCS), financial modernization, financial success, financial wellness, inflation

Synopsis
The poster will share findings from the 2022 state engagement survey and discuss the relevance of replicating to scale a statewide financial modernization program. Modernization offers Extension abundant opportunities to simplify and improve educational program delivery. In addition, the modernization process enables all Extension Faculty to replicate statewide data and provide equal access to services within risk-aversed communities. Relevant to this poster presentation is qualitative data in the form of feedback from participants, professionals, presenters, and other involved parties. Some data from pre-, post-, and follow-up evaluations may be referenced. This poster presentation is also designed to assist beginners and intermediate-level attendees as the Extension Faculty shares their advanced experience in delivering educational programs that empower attendees to sustain financial wellness tools and practices.

Introduction
A financial workshop can increase the knowledge base of families and communities to help access available financial data and services. However, more than a one-and-done financial workshop is needed to achieve data availability and economic stability to sustain and scale innovative financial measurement and assessment capabilities (Demirgüç-Kunt & Klapper, 2013). As a result, the Extension Faculty incorporated prospect theory in developing a financial day modernization program paired with a renewed state focus on mobilizing underserved families. Based on a need's assessment, the Extension Faculty found that low-income families constantly face economic uncertainty, especially due to rapid inflation and the COVID-19 pandemic. A survey conducted led to the creation of a semantic map around the question: Is a financial workshop without modernization ready to engage community stakeholders internally and externally in statewide advancement?

In this poster presentation, the Extension Team will collaboratively highlight their approaches toward innovations, program development, implementation, and outcomes derived from a risk-aversed community through program delivery on several key topics. This poster delivery will share findings from the 2022 state engagement survey (n=100 responses) and discuss the relevance of replicating a financial day modernization program statewide. The focus of this presentation titled '*Accelerating a Financial Day Modernization'* is on the methods and processes used by the University Extension Financial Wellness Faculty Team to plan and implement an expedited financial modernization program. With that in mind, underserved individuals and communities often face impediments to financial freedom. Consequently, underserved families living in risk-averse communities must rely on inclusive financial services information from local partners such as Land Grant University Extension programs to empower the community.

This two-fold benefit of the University's Extension program allows internal stakeholders to provide services to underserved populations, emphasizing equality and equity through program modernization. On the other hand, Extension Educators help low-income families and community partners rely on their limited earnings to pursue promising growth opportunities. However, consistent inputs and data standards of financial modernization allow for more value to be added to community development and provide a deeper understanding for residents served by Extension Faculty (Hasan & Hoque, 2021). Consequently, this presentation is uniquely geared toward two intended audiences: (1) financial professionals who participate in educational development opportunities to keep current on financial trends and (2) underserved families, youths, and communities who require financial services and assistance.

The Extension Faculty leading this session will explore the methods and processes the team used to plan and implement an expedited financial modernization program. With that in mind, underserved individuals and communities often face impediments to financial freedom. The overall goal of financial modernization includes, but is not limited to, eliminating the restrictions that allow equitable consumer access to financial services. The sub-goals include having attendees understand how Extension Faculty can be prepared to replicate a finance day modernization program expeditiously. Additionally, learning how to leverage existing financial services to reach underserved populations while empowering families, youths, and communities for financial success. And lastly, identifying strategies for planning needed to help develop and scale sustainable statewide financial programs and practices.

In this poster delivery presentation, the University Extension Faculty will address how states can leverage existing financial services to accelerate their financial modernization program. A program ready to engage community stakeholders internally and externally in state-led advancement. Extension Educators will incorporate the topics of Financial Well-Being, Financial Education, and Financial Issues with low-income consumers to offer strategies that will expedite an accelerated financial modernization program with a renewed focus on mobilizing families and communities. Each Extension Faculty will highlight their approaches toward innovations, program development, implementation, and outcomes derived from underserved populations through program delivery.

References

Demirgüç-Kunt, A., & Klapper, L. (2013). Measuring financial inclusion: Explaining variation in use of financial services across and within countries. *Brookings papers on economic activity*, *2013*(1), 279-340.

Hasan, M., Le, T., & Hoque, A. (2021). How does financial literacy impact on inclusive finance?. *Financial Innovation*, *7*(1), 1-23.

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Creating a Secure Retirement for Public Employees: Key Findings from an Effective Partnership

Suzanne Bartholomae, Mengya Wang, & Barb Wollan, Iowa State University

Keywords: financial education, retirement planning, program implementation, evaluation, partnerships

Target Audience
Financial educators and practitioners, program developers, program planners, evaluators

Purpose and Objectives
Most people dream of retirement, but once the reality of giving up a paycheck sets in, that dream can be delayed or disrupted. Key findings from program evaluation data and a five-year partnership will be presented. Attendees will increase their knowledge and understanding of the program development, implementation, and evaluation process. Attendees will be able to: a) describe strategies to develop and support a partnership for implementing a financial education program, b) discuss program activities that increase the engagement, knowledge, and behavior change of participants, and c) understand a range of learning outcomes associated with a retirement planning education program.

Description
Given that eight in ten older adult households are experiencing, or at risk of experiencing, financial insecurity, the National Council on Aging describes America as experiencing a retirement crisis (Basel et al., 2023). The crisis will not soon abate, as many Americans are not saving or planning for retirement. The 2021 National Financial Capability Study found 60% reported regularly contributing to a retirement account and 40% had ever tried to figure out how much they need to save for retirement (Lin et al., 2022). With approximately 5,900 Baby Boomers retiring daily (Fry, 2019), the on-going concern that Americans are inadequately prepared to finance their retirement has generated substantial interest in strategies and policies to address this issue.

Recognizing the retirement planning challenges faced by individuals and households, an educational program was designed in partnership with a public employee retirement system. The full-day program is targeted and tailored to public employees less than ten years from retirement. Given that just over one third of Americans are worried about running out of money in retirement and outliving their retirement savings (Duley, 2023), the goal of the program is to reduce participant stress and increase their confidence in their ability to effectively manage their finances during retirement. The program incorporates case scenarios to help participants understand how expenses change in retirement (e.g., inflation, health insurance, etc.). The program also features information about pension benefits and research-based strategies for structuring retirement income. A worksheet distributed at registration engages attendees to estimate their retirement income needs, identify their sources of retirement income, and to use online calculators to explore various aspects of retirement. Jointly delivered by educators from a state retirement system and cooperative extension, the program has reached over 1,000 employees through in-person and online deliveries.

The presentation provides an overview of a five-year partnership, the program content tailored to individuals nearing retirement, and the teaching strategies incorporated to engage participants and encourage them to take active steps related to planning for their retirement. The presentation details the program evaluation results, including changes in participant knowledge related to program topics, their level of engagement in pre-program activities, and factors associated with reducing stress and increasing program participants' confidence. Findings from the qualitative data will provide insight into the themes related to participant satisfaction. In sum, although retirement planning can be a daunting task for many people, the presentation will demonstrate that a well-timed program with relevant content when paired with the right partnership can support adults in their quest for financial security in later life.

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When Faith and Finances Collide: Navigating Effective Financial Counseling as it Relates to Charitable Giving

Schane D. Coker, AFC, FFC, Florida International University & Nyasha N. Hinds, MBA, Florida International University, Evangelist, Pentecostal Gospel Temple Ministries

Keywords: charitable giving, financial debt, financial hardship, financial planning, tithing

Target Audience

The target audience for this session are financial practitioners who are looking to deepen their practice when working with clients who regularly attend or participate in religious events and activities but may also face debt management issues.

Objectives/Purpose

Attendees will leave this presentation with tools, tips, and an expanded understanding of how to work with clients that value charitable giving to the church and other charitable organizations while also managing debt. This will be accomplished in the following takeaways:

- How financial practitioners can counsel clients who are facing financial hardships due to charitable giving
- Examining the importance of giving practices of clients to religious organizations to better guide them financially
- Counseling clients to give within their means and reduce excessive giving in order to get out of debt and avoid going back into debt

Description

This session will begin with a discussion between a financial practitioner and a religious practitioner about the topic of tithing, other types of religious and charitable giving, and how this relates to personal finance. The panelists will also discuss the issue of congregants who may be dealing with some type of financial hardship and how their church can assist them by referring them to a qualified financial practitioner as well as how a financial practitioner can approach churchgoers regarding working through a financial hardship.

The latter half of this session will be a "talkback" session where audience members will be encouraged to pose questions to the panelists regarding the topic of charitable giving and personal finances. Panelists will also engage with the audience members regarding their experiences working with clients who have either previously or are currently dealing with debt management issues to where charitable giving arises in conversation while working towards a client-focused solution.

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Would I Lose My Job as a Financial Professional because of Artificial Intelligence?

Lucy M. Delgadillo & Erica Abbott, Utah State University

Keywords: artificial intelligence, financial professions, financial tools

Target Audience

The audience for the presentation is very inclusive. Private practice professionals, military financial counselors, personal financial professors working with students, researchers, and extension program professionals can all glean much from the topic of AI and its impact on the financial field.

Objective/Purpose

The primary purpose of this session is to explore the awareness Americans have when they encounter AI in daily life activities and to investigate if AI represents a threat to the job performed by financial professionals, including their (potential) replacement or crossing of ethical boundaries. Nowadays, AI is used in almost every financial sector for which there is data. According to the PEW center, employers in the United States are increasingly looking for workers with AI-related skills. This session will open a dialogue and conversation about a topic generating some uncertainties and discuss how we can be proactive.

Learning Objectives/Key Takeaways #1:
Attendees will be able to describe the current state of awareness of AI among Americans.
Learning Objectives/Key Takeaways #2:
Attendees will be able to hear from experts and come to their own conclusions regarding AI in our practices.
Learning Objectives/Key Takeaways #3:
Attendees will leave the session with a list of needed skills to successfully perform in the demanding world of digital technology.

Description

The method of this forum will be a virtual, pre-recorded session in a panel format. The presenters will introduce the topic, share statistics on the awareness level of AI by Americans, and discuss contributions and challenges in the financial sector. Because the presenters work in a university setting, they identified two experts in the field of AI to be guest speakers for the forum. The presenters wrote a series of questions and gave them to the panel's members in advance, so they will have the opportunity to prepare their answers. In an interview format, the moderator(s) will ask those questions and invite panelists to respond.

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InTuition: An Interactive Extension Program Designed to Teach Youth How to Prepare for College and Careers

Luke Erickson, University of Idaho Extension

Target Audience

The game itself targets high-school aged youth who are getting ready to move on to careers and higher education. The AFCPE session will be primarily for practitioners/educators who work with youth. The program is presented with a fun and playful narrated game structure. InTuition is one of 11 innovative digital experiential financial programs under a digital educational games initiative from University of Idaho Extension.

Objective/Purpose

The InTuition program addresses important concepts of planning for a career and education including college savings options, major selection, school selection and costs, scholarships, Federal grants, work study, tuition payment plans, work-as-you-go plans, and wise use of student loans.

Description of Content and Method

This session presents impacts of InTuition, an extension program designed to teach youth how to prepare to make wise financial decisions around their careers and higher education. This is a timely educational program as youth and young adults face soaring higher education costs and the prospect of years, even decades worth of student loan obligations. The program itself allows participants to select from 8 characters, each with different values, goals, and interests, and help them make career and school decisions in an interactive experience.
This AFCPE session will: 1) Give a brief demonstration of the InTuition program 2) Present the impacts of the program, 3) Share directions for access to the program and all supplemental teaching materials, and 4) Share suggestions for program replication in other states.

Impact/Value to the field

This program was developed using research which indicates that youth respond well to digital games in the educational process (deCos, 2015; Schuster, 2012). Financial games and simulations have been successfully implemented both in and out of schools (Mosley, 2014; O'Neill, 2008). Digital games also have the ability to provide experiential learning opportunities of trial and error without putting learners at risk (Jones & Chang, 2014). Following a logic-model-based process, the authors identified educational priorities through an advisory board, surveys, and research. On the basis of these findings, the authors created a library of 11 digital youth personal finance educational games, including InTuition. They were designed to be delivered in group settings and were developed using the ADDIE instructional design process.

Program impacts include over 250 participants. Using a 5-point scale, participants indicated a 57% knowledge gain of career and education planning, and a 51% increase in intended behaviors to plan financially effective career and educational decisions, as a result of the program. Participants also shared comments on their intentions to share the program with friends and relatives and to play the game again on their own time outside of the classroom.

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Student Financial Wellness Programs: Developing a Relief Fund Counseling Framework

Catherine Komen, Prince Bosompim, & Dorothy B. Durband, Ph.D., Texas Tech University

Keywords: Financial counseling, student clients, teachable moments

Target Audience: Financial educators, financial counselors, and college students

Learning Objectives

a. Participants will learn how to apply a framework to effectively guide college students in navigating financial or crisis-driven situations, demonstrating their competency through practical application.
b. Participants will be able to demonstrate their ability to effectively guide and assist college students in navigating unique financial or crisis-driven situations by applying specific strategies.
c. Engage participants effectively through questions and answers, breakout sessions, and scenario review/discussion to promote active participation and learning.

Description of Content and Method

The Consumer Financial Protection Bureau (2016) defines financial counseling as providing personalized assistance and guidance to clients in one-on-one sessions, addressing specific, complex, or unfamiliar financial topics. Red to Black®, a Peer Financial Coaching program, offers in-person and virtual counseling sessions to students awarded the Raider Relief Fund (RRF), designed to help them overcome financial crises and continue their education. Lessons learned from the program highlight the importance of insightful questioning and active listening while considering factors such as clients' status, international or domestic, cultural orientation, and gender, all of which contribute to successful counseling outcomes.

The presentation will explore the client intake process, goal setting, and counseling sessions, emphasizing deeper listening and insightful questioning. Additionally, the presenters will discuss lessons learned in the sessions to better serve students from diverse backgrounds, among other factors. One effective technique that is eye-opening for many students involves reviewing actual consumption affordability and projecting income versus expenditure on a monitor. This technique provides teachable or 'cueing' moments where individuals are motivated to learn, guided by the support of a financial coach (Urban et al., 2020; Willis, 2008).

Relevance to Financial Counseling

Clients frequently require assistance understanding complex financial intricacies and acquiring essential knowledge and skills. With sufficient support, guidance, and motivation from the financial coach, clients exhibit a positive financial perspective toward their goals (Consumer Financial Protection Bureau, 2016). Some lessons from the virtual one-on-one counseling sessions include gender roles/preferences and filtration of shame and guilt. This will contribute invaluable insights that foster a profound connection and resonance with the client, further enhancing the effectiveness of the counseling process.

Implications for Researchers to Help Further Improve the Program

The virtual modality utilized for counseling sessions is more interactive and well-received by the student clients than face-to-face; understanding factors that lead to this success is imminent. Exploring the impact based on virtual modality may provide a better framework for enhancing the overall effectiveness of future counseling programs.

References

Consumer Financial Protection Bureau. (2016). *Financial coaching: A strategy to improve financial well-being*. http://www.consumerfinance.gov/adult-financial-education

Urban, C., Schmeiser, M., Collins, J. M., & Brown, A. (2020). The effects of high school personal financial education policies on financial behavior. *Economics of Education Review*, *78*. https://doi.org/10.1016/j.econedurev.2018.03.006

Willis, L. E. (2008). Against financial literacy education. *Iowa Law Review,94(*1), 197- 285.

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Digital Wellness: How to Inventory and Protect Digital Assets

Barbara O'Neill, Ph.D., CFP®, AFC®, Money Talk: Financial Planning Seminars and Publications

Keywords: personal finance, financial planning, estate planning, digital assets

Target Audience

The target audience for the programs described in this presentation: working age and older adults. The target audience for the AFCPE presentation: financial educators, researchers, and practitioners (e.g., planners, counselors, coaches) who discuss estate planning topics with students or clients.

Objectives/Purpose

1. Attendees will learn about digital asset categories and digital asset inventory methods.
2. Attendees will learn about RUFADAA and how digital assets are part of estate planning.
3. Attendees will utilize the information in their personal financial planning and/or with clients.

Description

Most people, especially young adults, have an active "digital life" with dozens, sometimes hundreds, of electronic records that include URLs for websites, usernames and passwords for personal accounts, PIN numbers, challenge questions, and other account authentication protocols (e.g., thumbprints and eye scans). Digital assets are any personal information stored electronically on any electronic device (e.g., laptop, tablet, cell phone) or a "cloud" server. Some digital assets have a monetary value (e.g., money held in bank or investment accounts and credit card numbers) or sentimental value (e.g., photographs stored in social media sites or in online "cloud" storage sites [e.g., Microsoft OneDrive, Dropbox, Google Drive, Flickr, and iCloud], which document family history and stories).

A recent study found the average person has 100 passwords (Rowe, 2023). That's 100 passwords, many with unique login protocols such as two-factor authentication (2FA)! Research also indicates that people with a higher income and net worth tend to have more digital assets with higher monetary value, including cryptocurrencies (Hopkin, 2022). Some people have digital assets worth tens, if not hundreds, of thousands of dollars (e.g., bank, brokerage, and retirement savings accounts, credit card accounts, cryptocurrencies, peer-to-peer payment apps, and more).

What happens if a computer crashes, a tablet or cell phone gets lost or stolen, devices get destroyed in a natural disaster, or people pass away without leaving instructions about how to access their online accounts? This workshop will discuss a face-to-face class and a webinar, *Digital Wellness: How to Inventory and Protect Digital Assets*, which describe digital asset inventory strategies and ways to strengthen device security. The recorded webinar is available online via Rutgers Cooperative Extension's *Wellness Wednesdays* program. This workshop's impact/value proposition is that there are relatively few estate planning presentations that focus exclusively on digital asset planning. This session will provide practitioners with curricula and digital asset inventory tools to use with clients.

The session will discuss key concepts from these two programs as well as audience feedback and evaluation results. It will define digital assets, describe different categories of digital assets, review strategies to inventory and protect digital assets, and outline a five-step digital asset planning process. In addition, the workshop will briefly describe the Revised Uniform Fiduciary Access to Digital Assets Act and digital asset planning resources. The best way to determine how many digital assets you have is to first identify them by general category (e.g., retailer accounts) and then prepare a detailed list. Some people keep this information in a record book or digital asset inventory worksheet while others prefer to store account access information using a password manager app or passkey.

References

Hopkin, G. (2022). Rich investors drawn to digital assets despite crypto crash. *Technology*. https://technologymagazine.com/articles/rich-investors-drawn-to-digital-assets-despite-crypto-crash

Rowe, A. (2023). Study reveals average person has 100 passwords. *tech.co.* https://tech.co/password-managers/how-many-passwords-average-person

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The ABCs of RMDs

Barbara O'Neill, Ph.D., CFP®, AFC®, Money Talk: Financial Planning Seminars and Publications

Keywords: personal finance, financial planning, retirement planning, income taxes, older adults

Target Audience

This workshop will discuss key content from a 90-minute class developed for older adults called *The ABCs of RMDs,* with a description of audience feedback and evaluation results. The target audience for the program that is described in this presentation: older adults. The target audience for the AFCPE presentation itself: practitioners who provide retirement planning education and counseling services.

Objectives/Purpose

4. Attendees will learn key characteristics about RMDs and how they are calculated.
5. Attendees will understand the importance of tax diversification in retirement savings accounts.
6. Attendees will utilize the information in their personal financial planning and/or with clients.

Description

A challenging financial aspect of retirement, especially for diligent savers, is taking required minimum distributions (RMDs) from tax-deferred retirement savings accounts (e.g., 401(k)s, 403(b)s, Thrift Savings Plan, SEPs, and traditional IRAs). RMDs can have a significant impact on income tax liability in later life and are, thus, a financial planning topic of interest to financial practitioners, no matter what the age of their clientele. Why? Older adults are concerned about RMDs because they must currently pay income taxes on them and may end up in a higher tax bracket than when they were working and younger adults can make informed retirement savings decisions (e.g., a planned tax diversification strategy and Roth IRA conversions) to minimize the impact of RMDs on future taxes.

Several key changes were made to RMDs during the past two years. A new Uniform Lifetime Table went into effect in 2022, based on revised life expectancy figures. Compared to the previously-used table, age-based divisors are slightly higher, which makes RMD withdrawals slightly smaller than they were before with the previous IRS table. Still, like pre-2022 RMD calculations, the percentage of account balance withdrawn for RMDs increases with age, reaching 50% (divisor of 2) at age 120. At age 73, taxpayers must withdraw 3.77% of their account balance and at ages 80 and 90, the RMD withdrawal percentages increase to 4.96% and 8.20%, respectively. Another key change to RMDs, as a result of the 2022 SECURE 2.0 Act, was a second recent increase in the starting age for RMDs. RMDs must now begin at age 73 for taxpayers born from 1951 to 1959 (effective in 2023) and at age 75 for those born in 1960 or later (effective in 2033) vs. age 72 previously and, before that, age 70.5 for RMDs taken by older taxpayers.

The workshop will discuss content from a class for older adults: basic facts about RMDs (e.g., required beginning date and how to make RMD withdrawal calculations), the new IRS life expectancy tables, tax implications from adding RMDs to other ordinary income (e.g., NIIT, tax on Social Security and Medicare IRMAA payments), tax withholding for RMDs, tax penalties for incorrect RMDs, ways to reduce the tax impact of RMDs, and options for using money that is withdrawn from tax-deferred retirement savings accounts (i.e., paying taxes and spending, gifting, or re-saving in a taxable account or Roth IRA, if qualified). A RMD planning worksheet will be distributed.

Another key topic in the workshop, for AFCPE members who are early- or mid-career or have clients in that age range, is purposeful tax diversification with tax-free, tax-deferred, and taxable accounts to avoid having a "large RMD problem" later in life. Roth IRAs, for example, provide a pot of tax-free money for spending in retirement. Evaluation comments from participants in face-to-face programs about RMDs will also be discussed.

The workshop's impact/value proposition is that there are relatively few programs that focus primarily on financial topics of concern to older adults, including RMDs and their impact on income taxes in later life. This presentation, and materials shared afterward, can help fill this void. Practitioners in their 20s to 50s with similarly aged clients can benefit by learning about tax diversification at an early life stage where they can implement a proactive retirement savings plan. In other words, learning a "future self" topic can help inform "present self" financial decisions.

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What Is Culturally Relevant Financial Education, Really? Bridging Theory and Practice

Miguel Quiñones, University of Minnesota

Keywords: culture, diversity, financial education, inclusive, practice

Target Audience

The presentation caters to those who want to enhance their financial education practices, connect with a broader audience, refine their approaches, or improve their ability to engage individuals from diverse backgrounds. Whether you work in formal classroom settings, community outreach programs, or informal conversations about finances, this session will provide valuable insights and practical strategies to help you convey financial matters to people who are different than yourself.

Objective/Purpose

In light of the shifting demographics in our country, there is growing interest in crafting "culturally relevant" financial education." But what exactly does this elusive term mean, why is it important we get it right, and how can we effectively implement it in our practice? This session serves as a bridge between theory and practice by exploring the theoretical foundations of cultural relevance in financial education and drawing upon insights from the presenter's experience working with communities of color. Through this session, attendees will gain clarity on the concept, discover innovative approaches to engage individuals and communities from diverse backgrounds, and develop practical tools to help them integrate principles of cultural relevance into their own work or discipline, ensuring that they truly resonate with their audiences and leave a lasting impact.

Description

Culturally relevant financial education recognizes the importance of tailoring financial literacy instruction to account for the diverse cultural backgrounds, values, and experiences of learners. However, implementing these strategies can be challenging due to the multifaceted nature of culture. To begin, it's crucial to clarify what cultural relevance is not: it is not merely translating materials or substituting examples familiar to the audience, as superficial changes often fall short of making a meaningful impact, typically referred to as *surface-level adaptations*. Instead, practitioners must engage in a nuanced approach tailored to the specific needs and goals of their learners.

This approach transcends mere superficial adjustments, delving into deep-structure adaptations that encompass how learners construct knowledge, acknowledge their life experiences, and align with their cultural values. To accomplish this, educators must comprehend diverse ways of knowing, recognize the communal dimensions of financial literacy, and foster sociocultural awareness to address contemporary challenges and explore innovative possibilities. For example, it may entail immersive strategies like incorporating specific anecdotes or traditions into the content, identifying the convergence of learners' financial and familial objectives, or acknowledging the structural constraints faced by their audience.

While it may not be feasible to comprehensively address all these elements, considering them enhances the potential for establishing a culturally responsive educational environment that fosters critical reflection and, ideally, results in positive attitudes and behavioral changes concerning financial matters. Authenticity plays a pivotal role, as learners are perceptive and value educators who can relate to their financial practices and cultural values. Ultimately, in culturally relevant education, there is no one-size-fits-all solution; it necessitates dedicated efforts to connect with the people being served, meeting them where they are.

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Demonstrating Client Impact: The Financial Capability Scale, Your Clients & Your Private Practice

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Keywords: data collection, financial capability, financial coaching, outcomes, practice management

Target Audience
This session is for financial coaches and counselors, in private practice and/or working at an organization, who coach and counsel clients individually or in a group setting and educators and researchers.

Objectives/Purpose
The Financial Capability Scale is an outcome of efforts to support the financial coaching industry with demonstrating client impact. It is a field-ready tool that measures one's financial capability as a snapshot in time, as well as over time. The FCS has six questions and can be completed in less than 5 minutes via paper or online. The questions will be reviewed and scored individually to demonstrate how easy it is to collect this data for each client that is served.

Description
In this session, attendees will be introduced to the Financial Capability Scale (FCS) as a tool to measure their clients' financial capability as well as a data collection tool for their private practice. This survey is a relevant tool and resource for financial coaches and counselors as they are commonly asked, "is financial coaching or counseling effective"? By learning about this tool, they can answer that question, incorporate a field-ready tool into their practice, easily determine the financial health of their clients and collect and own raw data unique to the population of clients they serve in their private practice.

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Improving Client Outcomes and Coach Efficiency Utilizing Technology

Amelie Riendl, Mil Money Coach, Financial Coaches Network

Keywords: automation, efficient, fintech, software, technology

Target Audience
Financial coaches and counselors who are interested in utilizing technology to improve their efficiency and effectiveness with their clients.

Objectives/Purpose
Many financial coaches don't have sufficient visibility into their client's finances. This presentation shares how counselors can use automation to improve their client relationships via accountability checkpoints and decrease the more tedious parts of financial management.

Description
The presentation will cover some of the challenges we face when working with clients and how technology can help improve our effectiveness, including a live demonstration.

Goals Monitoring
Technology helps monitor goals by automatically updating balances and providing a progress visual. Automated communications notify clients if goals are off track in case action is needed.

Cash Flow Tracking
Software solutions use rules for automatic transaction categorization based on a client's account setup and spending habits. When done well, 90% (or more) of new transactions are automatically categorized, reducing client overwhelm. If a client wants help, some technologies allow coaches to help with managing cash flow.

Spending Plans
Technology allows us to spend less time on the tedious part of tracking transactions and frees up time to focus on results. Software can automatically calculate a recommended spending plan based on past behaviors or show spending trends to identify potential future spending updates.

Net Worth & Other Reports
Technology can automatically track clients' net worth over time to show how their overall financial health changes over time. Access to other key reports allows counselors to be more effective at communicating progress and preparing for counseling sessions. Counselors can send customized reports to the client or share one during a counseling session to aid the discussion.

Automated Communications
Automated weekly reports on key categories can help clients make decisions and adjustments to spending. Monthly/quarterly reports can serve as a reminder to review trends such as net worth and spending. Automatic emails to clients reduce the need for monitoring and alert them to potential issues as soon as they occur.

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Jazzed about *Real Money. Real World.* Experience

Roseanne Scammahorn, Southern Rural Development Center, Melissa J. Rupp, AFC®, Sara Jackson, Margaret Jenkins, & Susan Zies, Ohio State University Extension

Keywords: Experiential learning, financial literacy, youth education

Target audience
Individuals whose programming has a youth/young adult engagement focus.

Objectives/Purpose
The *Real Money. Real World.* workshop has three primary goals. Attendees will:
1. Increase awareness of the program's four preparatory classroom lessons, budget and decision-making activity, and reflection activity.
2. Gain hands-on experience implementing this basic money management tool using monthly spending decisions for cost-of-living expenses.
3. Increase attendees' awareness of how youth experiential financial education improves financial outcomes as adults, resulting in less debt and a higher quality of life.

Description
Experiential learning is all that jazz! Learning by doing inspires curiosity, builds lifelong skills, grows leaders, and fuels adventure. Explore an evidence-based financial literary program available for youth ages 13-18 years. Four classroom lessons are provided followed by a real-life spending simulation allowing students to apply their *new* knowledge, making lifestyle and budgeting choices like those made by 27-year-old adults. *Real Money. Real World.* is a great model of "learning by doing" followed by the opportunity for reflection and discussion.

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The Opportunities and Risks of Employer Company Stock in RSUs and ESPPs

Cherie Stueve, PhD CFP® AFC® FFC® FBS®, Plancorp in strategic partnership with BrightPlan
& Derek Jess, CFP® ,Plancorp

Keywords: Employee stock purchase program (ESPP), equity compensation, financial coaching, investor biases, Restricted Share Units (RSU), tax education

Target Audience
Financial practitioners (Beginner to Advanced), financial educators

Objective/Purpose
The purpose of this presentation session is to build knowledge about equity compensation and company stock programs, specifically for a financial professional to better educate clients unfamiliar with the basic features of RSUs and ESPPs and feel more confident themselves in coaching around the client's personal decisions with company stock programs.

Description
Restricted Stock Units (RSUs) and Employee Stock Purchase Plans (ESPPs) are growing compensation trends for employees of both publicly-trade and pre-IPO companies. New career professionals, as well clients across all life stages, are exploring guidance to these complex programs. RSUs have a volatile estimated valuation when granted to the employee & long vesting schedules, with a range of election features available in the custodian platform that manages the shares. ESPP programs vary by company but typically have a discount for an annual or semi-annual purchase, funded through voluntary payroll deductions, with the potential for a favorable lower price with any lookback provision. Both have the potential to support a range of goals: emergency savings, saving for a large purchase like a home, debt repayment (e.g., credit card, education, mortgage, etc.), daycare or private education payments, IRA contributions, and overall wealth-building goals.

The potential for your primary client or their spouse having access to these compensation styles is becoming more likely, especially as spouses of mobile military members find employment stability with virtual work. Given the complexity of how to evaluate the benefits and risks of these programs, an informed financial professional can provide education support for a decision-making framework for participation, management of company stock holdings, and even consideration of different compensation structures for multiple employment scenarios.

Learning Objectives/Key Takeaways
This session will provide the basic characteristics of RSUs and ESPPs and how each has the potential to be mechanisms to (a) increase annual compensation, (b) increase personal investment wealth, and (c) fund immediate needs or long-term goals. This knowledge will initially build and/or strengthen a financial professional's knowledge about these two specific types of company stock holding opportunities. Scenario examples will be presented for immediate engagement with the key learning objectives.

This session will also outline some of the more complex features and risks associated with managing RSUs and ESPPs holdings such as (a) concentration risk, (b) dual risk of personal wealth and employment with the same company, (c) advantages and disadvantages of holding or liquidating company stock, and (d) critical tax education regarding holding periods for long-term and short-term capital gain/loss eligibility, which includes the IRS "Wash-Sale" rules if liquidating at a loss.

Finally, this session will help increase financial professionals' knowledge about common mistakes of managing equity compensation, including (a) how investor biases (e.g., optimism, anchoring, loss aversion, etc.) can influence participation and liquidation decisions and (b) how to avoid too much reliance on favorable ESPP transactions from the past that may not materialize consistently in the future.

Most importantly, financial professionals will better understand the features and complexity of RSUs and ESPPs, feel more confident to guide the client through their own brainstorming of the advantages and disadvantages of RSUs and ESPPs elections and management, and then be able to identify when a referral to an investment advisor and/or tax planning professional is warranted.
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Community Financial Education that Works: If You Listen, They Will Come!

Nancy Sullivan Graf, AFC®, CCUFC, BMI Federal Credit Union (retired)
Terri Gregoroff, CCUFC, BMI Federal Credit Union

Keywords: community financial education, financial capability, financial social work, program design and implementation, program evaluation

Target audience
The intended audience for this session includes those interested in community financial education and financial social work, with a focus on providing vulnerable and financially stressed populations with accessible personal finance content they consider respectful, meaningful, and relevant to their specific circumstances.

Objectives/Purpose
The purpose of the session is to share the design, materials, methods, and strategies used to create a successful and well-attended community series on personal finance. Three Financial Fitness Boot Camps were offered, and revisions to each were made based on feedback and assessment results from participants and staff. Attendees will be provided with information they can use to design and conduct impactful community financial education, including how to develop a program specific to the needs and interests of participants.

Description
Learn how an award-winning community financial education program was designed and implemented by the financial education staff at a credit union. The Financial Fitness Boot Camp series was conducted for participants in a community mental health agency's Women's Program. Find out what worked and what revisions were made over the course of three separate Boot Camps.
Presenters will share:

- how the personal finance topics included in the series were chosen
- what specific content, tools and methods were used
- how participant needs, interests, and progress were assessed
- five strategies key to the design and success of the program

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The Road to Private Practice: 9 Keys to Successfully Starting a Financial Coaching Business

Joshua Escalante Troesh, CFP®, MBA & Emily Blain

Keywords: Niche, private practice, small business

Target Audience
Financial coaches and counselors who are interested in starting their own private practice OR who have started their own private practice and are looking for ways to be more successful.

Objectives/Purpose
To help aspiring/new private practice financial coaches avoid the biggest and most common pitfalls of being a new business owner

Description
Private practice financial coaches or counselors can make a huge impact on people's lives, but only if their businesses are successful. This presentation will share 9 key steps around getting clients, working with clients, and running your business. If we are ultimately going to serve the millions of people who need financial help, more coaches and counselors will need to build financially successful private practices to meet that demand.

The 9 points we'll be discussing are:
1. The Minimally Viable Business
2. 5 reasons businesses fail
3. Common traps to avoid
4. The importance of focusing on one niche
5. How to run the business like a business
6. How to get clients in the short-term
7. Building a defined process for working with clients
8. Differences between business budgets and personal budgets
9. A roadmap for a successful business launch

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Developing a Caregiving Playbook for Financial Advisors:
Uniting Advisor, Client, Research, and Organizational Perspectives

Adam Felts, MIT AgeLab, Alexa Balmuth, MIT AgeLab, Samantha Brady, MIT AgeLab, Lisa A'Ambrosio, MIT AgeLab, and Joseph Coughlin, MIT AgeLab

Abstract
Family caregiving is a challenging role with significant financial implications. Caregivers may need guidance from professionals in order to manage the complexities of providing care. The MIT AgeLab, a social science research lab that studies topics related to aging, and Transamerica, a financial services company, collaborated on a guidebook to help financial advisors work with clients who are family caregivers. This "field guide" was developed out of prior research, interviews with former caregivers who worked with an advisor while they were caregiving, and with input from a financial advisor.

Introduction
The Massachusetts Institute of Technology AgeLab works with businesses to help them better understand and meet the needs of older adults and their caregivers. In 2021, the AgeLab began a project with Transamerica, a financial services company, to develop a tool to help guide client-facing financial advisors who work with family caregivers.[1]

Providing care can be a complex and demanding responsibility with significant financial implications. Moving a care recipient into an assisted living facility, for example, can cost tens of thousands of dollars per year. Caregivers may have to turn down advancement opportunities, reduce their working hours, or leave work entirely in order to focus on providing care. Financial professionals can help their clients prepare for potential future caregiving needs, or guide current caregivers in their planning and decision-making.

However, some financial advisors may not see caregiving as a relevant aspect of their work with clients. Alternatively, they may not be sure how to talk to clients about caregiving. For these reasons, Transamerica and the AgeLab developed a field guide to help advisors initiate conversations with clients about caregiving.

The Stakeholders
The AgeLab and Transamerica worked together to develop the playbook for financial advisors, driven by different incentives and aims. The playbook also has two intended audiences: advisors and caregivers. Financial advisors are the direct audience for the playbook, while family caregivers will indirectly be subject to the playbook by advisors who use it to guide their practice.

The MIT AgeLab
The MIT AgeLab is a social science research lab at the Massachusetts Institute of Technology. The AgeLab is funded substantially by research contracts with businesses. Businesses pay the AgeLab to conduct research for many reasons. Some organizations aim to understand what older consumers think about their products or services. Other companies want to position themselves as thought leaders in their field.

Regardless of the aims of its sponsor companies, the AgeLab focuses on one organizational mission: to improve the lives of older adults and their caregivers. Working with businesses allows the AgeLab to influence how companies design and deliver products and services for their older customers or clients. Research performed with sponsors can also be appropriated for submission to academic journals, furthering the discourse on aging. Finally, working with businesses provides an avenue for the AgeLab to educate professionals on how to better serve older adults and prepare people for longevity.

The caregiving playbook represented an opportunity for the AgeLab to educate a set of professionals – financial advisors – on how to better serve clients who are older adults. Financial advisors stand in a unique position relative to older people and their caregivers. The number-one goal that people save and invest money for is retirement. Financial advisors are in the retirement industry, but preparedness for retirement and aging is more complicated than

[1] See Caregiving and the Future of Financial Advice: A Financial Professional's Guide (2021). Produced by Transamerica and the MIT AgeLab.
https://cdn.bfldr.com/86JM1UOD/as/kgvxr8z6ncvvwjvs54t3s4b/MIT_Caregiving_Advisor_Playbook_Field_Guide

just having enough money. A key aspect of the AgeLab's outreach and thought leadership is educating financial advisors on how to better prepare their clients for challenges related to longevity, including family caregiving.

Transamerica
Part of Transamerica's business involves selling financial products to financial advisors, who then sell those products to clients. The relationship between Transamerica and the financial advisory profession is analogous to the relationship between pharmaceutical companies and doctors. Transamerica rarely sells its products directly to individual customers. Its business is dependent on its relationship with client-facing financial professionals.

The products (such as life insurance, annuities, or 401k plans) that financial services companies sell today are very similar to each other. Nonetheless, they operate in a highly competitive market environment. Given the similarity of their products, these companies have to find other ways to differentiate themselves to the professionals they sell to.

Often, these companies do so by offering thought leadership and educational materials to financial advisors. This builds positive brand recognition among advisors and strengthens the relationship between the company and existing customers.

Transamerica develops materials to help guide financial advisors on working with clients who face challenges related to longevity. Prior to the caregiving playbook, Transamerica published a "A Field Guide to Dementia," also developed in collaboration with the AgeLab, to guide advisors to help their clients understand and address the financial implications of Alzheimer's and dementia.

The playbook, then, represents an effort by Transamerica to demonstrate value to financial advisors beyond the products it sells them, through education and professional guidance.

Financial Advisors
The financial advice profession is changing. New technologies promise to reshape the industry. At the same time, clients have different needs and expectations than those of prior generations.

As people are increasingly likely to live into their 80s and 90s, retirement planning is more complicated than saving for a few years of leisure after working life. Financial advisors, who are already involved in helping people plan financially for the future, are uniquely positioned to play a role in helping people plan for longevity – including planning for housing, transportation, and care in older age. An advisor who expands their role to encompass longevity planning increases his or her value significantly to clients.

Advisors are feeling pressure in the wake of new technologies like generative AI. Morgan Stanley, a financial services company, has developed an AI assistant to help advisors with many aspects of their jobs.[2] If chatbots are able to provide sound information and advice about financial products, the advisor's role may be diminished. A potential counter to these technological developments is for the advisor to expand his or her range of services and expertise – becoming a guide and conduit for longevity planning. Advisors can better recruit and retain clients by addressing a holistic range of issues related to future-planning.

Family Caregivers
Family caregiving is a complex and challenging role. Finding information about caregiving – including locating service providers – can be a demanding task. At least one professional, the geriatric care manager, specializes in working with family caregivers. But geriatric care managers are expensive and can be difficult to access. And even with a geriatric care manager, caregivers may need further assistance in navigating the complexities of caregiving, especially in the realm of finances.

The goal of the playbook is to arm financial advisors with the tools and knowledge to help clients who are family caregivers. Caregivers may need help with conceptualizing the costs of caregiving and how to prepare for those

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[2] See Bautzer, T. and Nguyen, L. ("Morgan Stanley to launch AI chatbot to woo wealthy. *Reuters.* https://www.reuters.com/technology/morgan-stanley-launch-ai-chatbot-woo-wealthy-2023-09-07/

costs. They may need assistance with being connected with providers of services. Or they may just need support in the form of conversation and understanding. By training financial advisors to understand the challenges of family caregiving, we hope to develop a new professional resource for family caregivers.

The Process

Development of the playbook happened in three phases, with more stakeholders included in each phase. The multiphase development of the playbook was not systematic, but driven by discovery and learning throughout the process.

In the first phase, AgeLab researchers and Transamerica thought leaders worked together to draft a playbook. The AgeLab relied upon its prior research on family caregiving – including research conducted through CareHive, the AgeLab's panel of family caregivers – to provide an account of family caregiver needs and experiences. This method of development ran aground. Early drafts of the playbook lacked structure and illustrative examples of facts and concepts. Prior knowledge – even the substantial knowledge possessed by an aging research lab – wasn't enough.

To add substance to the playbook, in the second phase, the AgeLab recruited former family caregivers who had worked with a financial advisor to participate in interviews about how their advisor helped them (or didn't) with their caregiving. We spoke to five former caregivers. The interviews provided quotations from caregivers to illustrate their particular experiences. They also surfaced themes that we used to organize the playbook.

One family caregiver who participated in an interview spoke very highly of her financial advisor. The AgeLab reached out to that advisor, Forrest Williams, to provide his input and to help develop new material for the playbook. Mr. Williams provided a foreword to the playbook and wrote responses to a set of hypothetical client situations that an advisor might encounter. He also helped brainstorm "action items" for advisors to employ in their relationships with caregiving clients.

By ultimately including caregivers' and a financial advisor's perspectives, the playbook includes input from all its stakeholders. Incorporating targeted research into the development process surfaced new findings and themes for how financial advisors can work with family caregivers.

We recommend that researchers and practitioners who develop similar materials systematically incorporate these steps of involving stakeholders from the beginning of the process.

Findings from Interviews

MIT AgeLab asked former family caregivers about their experiences with their financial advisor. Former caregivers who indicated that they had worked with a financial professional and had discussed their caregiving situation with them were eligible to participate in an interview. Interviewees who reported varying degrees of financial strain—from not a strain at all to a high level of strain—were selected to participate. One interviewee reported having a somewhat negative experience with their financial advisor, while the other four all reported having an extremely positive experience.

The researchers asked these former caregivers questions on how they communicated with their advisors about their caregiving, and the ways that advisors were able to assist them in both the financial and general aspects of the caregiving role. Below are five themes that arose from the study, with illustrative excerpts drawn from the interviews.

Contact is Key

Establishing regular contact with clients helps an advisor earn trust and a reputation for reliability. One respondent described feeling fortunate that her advisor contacted her regularly and was easy for her to reach. "I never know when he'll just call me, and if I don't answer, he'll say, 'Give me a call back.' He does that pretty much on a regular basis. I'm lucky with that, because I think some financial guys are probably busy and don't take the time."

Keeping regularly engaged with clients also helps the advisor to stay updated about events in clients' lives that may pertain to their finances—such as entering a caregiving role. A client may become a caregiver abruptly; some of the respondents took on caregiver responsibilities following acute changes in health for their spouses or parents. One respondent described how keeping in the know allowed her advisor to keep track of major changes in her life due to caregiving: “As time went on, [my advisor] saw what was happening with my husband, my concerns about not working, and needing to hire help, which was expensive. So, he understood what [my] goals were.”

Be Personable Without Getting Too Personal
While having some knowledge about a client’s life is important, an advisor may be wary of overstepping the boundaries of his or her professional role. One respondent emphasized a middle ground between having a personable advisor and an advisor getting too personal: “They have to be able to interact right to get you to be confident with them. You trust them with your monies and then sometimes you start conversing about your family and lifestyle … it's kind of tricky [to do] without being too nosy about somebody's life.”

In describing the right manner for advisors to relate to their clients, one respondent made a comparison to another kind of advice-giving professional, the physician: “I would tell [advisors] to get to know your clients and develop a personal relationship. I don't mean you have to be their best friend, but I think they really need to understand, almost like a doctor, about what the individual client’s needs really are and what their situations are.”

While having awareness of the personal situation of clients is important, the advisor should always ground his or her role and trustworthiness in his or her financial expertise. One respondent emphasized that in the end, what she needed from her advisor was his financial acumen and understanding. “Our focus was always on the financial aspects [of our situation]. Some of the things that were driving our needs might have come about because of the caregiving responsibilities, but [our advisor] was a *financial advisor,* and that's what we needed to hone in on. That's what we needed him for.”

Find a Source of Credibility
Some respondents were not sure how qualified their financial advisors were to discuss and help them with their caregiving. At the same time, they were open to any conversation that could be useful. As one respondent said: “I wouldn't have expected anything from him beyond the financial. [But] if he had said something that I thought sounded like it would be helpful, I would have followed up. I was open to anything that was going to help make this situation more doable.”

Respondents who felt that their advisor was well-suited to talk to them about caregiving often pointed to the advisor’s ability to reference his or her own life experiences. One respondent discussed how her advisor fell back on his work with other clients to understand her situation: “There were oftentimes issues that he could identify. Usually it was anecdotal, through—things other clients have done, ways they've managed, so that we could draw on that knowledge in his experience.”

Another respondent believed that her advisor was able to relate to her and her care recipient’s challenges with managing dementia due to his own experiences. “He had a grandparent who also had Alzheimer's,” she said. “So he knew how to be around [my husband] and talk around him where he could understand.”

One respondent felt that financial advisors might benefit from being better-informed about aging- and health-related challenges that clients may face: “They could understand geriatrics a little more, get more involved with what happens when people age. Because a lot of younger people think they're gonna live forever, and it's an eye opener. Maybe a financial person doesn't [always] look at the medical side of life because they're so involved with money.” Another respondent said that hypothetically, seeing that her advisor possessed a formal certificate for advising caregiving clients would make her more at ease. “If you're sitting at a desk and you see a little certificate as you're glancing around [the office], you're like, ‘oh, this person is trained to help me with my care [recipient].’”

It’s All in the Family
Over time, or even from the beginning of working with a client, an advisor may discover that managing family dynamics is just as much a part of his or her work as investing monies. In caregiving situations, the primary financial manager within a family—and hence the family member who the advisor primarily works with—can suddenly change.

For example, one respondent discussed how her husband’s dementia forced her to begin managing the family’s finances for the first time. Initially lacking in financial literacy, she spoke gratefully of her advisor’s patience and willingness to explain financial concepts to her. “He made it very easy for me to understand by giving me one-on-one conversations … And if I didn’t understand, he would say, ‘What can I do to help, what is it you don't understand?’ And I would say, ‘Well, if I knew what to ask you, that means I would already understand!’ I felt very comfortable in talking like that to him.” Later in the interview, she said, “I'm blessed to have someone like [my advisor], because he's almost like a family member.”

In other cases, the shifting of financial management responsibilities within a family may result in intrafamily conflicts. An advisor may need to be prepared to manage familial disputes and work with disputant family members. One respondent described a conflict she faced with her brother after the death of her care recipient, and the role her advisor played in aiding her:

> Once my [care recipient] father died, my brother experienced an intense interest in [his] financial affairs, to the point where there ended up being litigation. When my brother was starting to get involved, [my advisor] actually got himself licensed to provide services in the state where my brother lives … and then he made a trip out to the west coast specifically to meet with my brother and talk about my parents’ estate and the settlement of it.

Broadly speaking, the interests of the client’s family may be inseparable from the interests of the client as an individual. Speaking in familial terms and understanding the client’s family relations may be part of most of the advisor’s interactions with him or her, as one respondent suggested: “I would say … the family situation was, in each meeting, probably 75 percent of what [my advisor and I] talked about. And I kind of consider that part of the caregiving needs.”

Make Life Less Complicated

The respondents often discussed ways that their advisors were able to help them in not only growing their assets, but in coping with the strain and challenges of caregiving. Most generally, respondents mentioned feeling gratitude that they had someone to help ease the burden of managing their financial responsibilities and ensuring their financial future. “By being able to trust the financial side of all of this to [my advisor] and to know I can trust and depend on him, that is a huge burden lifted from my shoulders because …if I was trying to manage these investments all of my own … the time and effort and lack of knowledge and experience I have, I know I wouldn't do a good job of it.”

Caregivers are often caught up in the day-to-day busy-ness of providing care, with little time or energy to think about the more distant future. While being empathetic to their immediate needs and concerns, an advisor can play a conscientious role for caregivers of reminding them of the long-term view. As one respondent said, “You can't see your [own] future … Maybe [a financial advisor] has more experience with other clients that things could happen abruptly, and you better really think about what you need to do with your monies and be ready.”

Within the boundaries of his or her knowledge and expertise, an advisor can even speak directly about the challenges that caregivers face in caring for a loved one. One respondent was aided by a timely piece of literature that his advisor provided to him:

> My brother has frontal temporal dementia, which came on at a young age. [My brother and I] met with [my advisor] and we discussed my brother's finances, and he provided me with a book that he gave to clients about various forms of dementia … which I thought was really a nice thing to do, and I read the book and it was very helpful.

To manage the complexities of the caregiving role, caregivers may need the assistance of experts in addition to a financial advisor, including attorneys and geriatric care managers. A helpful advisor can play the role of a hub of resources, multiplying his or her expertise by providing a network of other professionals.

One respondent developed a relationship with an eldercare attorney through a reference from his advisor: We were referred to an attorney [by my advisor] who actually came to [my advisor’s] office and met with us regarding setting up a trust. And so, based on that [initial reference], we developed a relationship with this attorney and other attorneys within his network.”

Above all else, the most helpful role of a financial advisor for many caregivers may simply be to make their lives feel less complicated. As one respondent explained, “Everything is so complicated when you’re a caregiver. The last thing you need is more complications, … It's just hard, and you know, if you can't do it yourself, it's good that there's people out there who can help you.” Another respondent believed that by reducing some of life’s complexity, a good financial advisor could make life easier for anyone. “I think anybody, no matter who they are, no matter how much money they have, they should have a financial advisor.”

Shaping Behaviors, Shaping Lives: Experiential Learning for Financial Wellness

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Keywords: behavioral finance, diversity, equity and inclusion, financial wellbeing

Target Audience
Educators, Practitioners

Objectives/Purpose
Viewers will learn about innovative teaching techniques backed by empirical evidence.

Description
This poster represents a study which sought to examine if student financial knowledge, attitudes, and intended behaviors are related to college students' financial education and experiences. An experimental design (best when looking for contributory relationships) was used to determine the causal effects of a new and innovative Financial Wellness Project (FWP) consisting of three primary elements: a finance guide, the presentation of the guide in a group setting using active learning techniques. The results overwhelmingly demonstrate that the FWP was an effective tool for increasing students' financial knowledge, increasing students' positive attitudes toward finance, and increasing their effective intended short-term and long-term financial behaviors. Moreover, the results show that the effects of the FWP were often the largest for students with marginalized identities: low-income students, Students of Color, and female students.

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Personal Finance and Incarceration: The Intersection of Race and Poverty

Lisa Mauthe, EdD

Keywords: diversity, equity, and inclusion; financial behavior/behavior economics; incarceration

Existing systems of power and exploitation hinder the efforts of previously incarcerated individuals reintegrating into communities, and there are few financial wellness resources to serve this vulnerable group. Because Black men experience poverty at a higher rate, are more likely to have negative encounters with police and legal systems, and are incarcerated disproportionately, a study was undertaken to explore unique circumstances of individuals in this segment of our population, and to center their voices and experiences as they relate to personal finances. The study was design to investigate these research questions: What do previously incarcerated Black men know about personal finance, and how did they learn it? As part of the collaborative effort, implications for practice were co-created by the participants and researchers.

Methods

This qualitative, phenomenological study was designed to explore the problem and gain a "complex, detailed understanding of the issue" (Creswell & Poth, 2018, p. 45). Because of the marginalization experienced by those with history of incarceration as a group and as Black men in general, hearing and amplifying these "silenced voices" through their stories and their meaning aided in the understanding of what the participants know about personal finance concepts and how they learned it.

Participatory action research (PAR) was employed as a transformative framework both to properly address the experiences of marginalized individuals or groups, and to recognize the "power differential between [the researcher] and the people in the study" (Mertens, 2009, p. 234). A cultural insider served as co-researcher for aspects of the data collection and analysis, primarily to reduce the possibility of causing harm to the very people whose voices were meant to be centered, and to have "someone able to establish rapport quickly in a challenging setting" (Allred, Boyd, Cotton, & Perry, 2020, p. 5). The co-researcher mirrored the racial and incarceration background of the participants and engendered more complete trust and acceptance from them (Corbin Dwyer & Buckle, 2009); this almost certainly prompted richer data collection than an outsider interviewer alone could achieve. The participants were invited into the research process via individual interviews, theme reviews, and ultimately the development of solutions using the aptitudes of all involved—the participants, the co-researcher, and the principal researcher.

Critical Race Theory (CRT) provided the theoretical framework that focused on race as the lens through which actions and experiences are viewed, and in particular used the CRT tenet of centering the narratives of people of color. The narratives of the study participants were vital because "simply sharing racial equity audit data with staff, families, and community members may not motivate these individuals to want to correct these inequities" (Capper, 2019, p. 114). By focusing on the narratives of Black men who experienced incarceration, specifically regarding their knowledge of personal finance and how they learned it, the wisdom and experiences of the people closest to the phenomenon were revealed and acknowledge as authentic truth.

Data was collected via a series of virtual interviews of about an hour in length: interviews to collect qualitative data, analysis of themes for accuracy and relevance, and co-production of knowledge to address next steps. Data analysis consisted of the constant comparative method, In Vivo and Emotion coding, and codeweaving.

Findings

After analysis of the shared yet unique experiences of the participants, five major themes emerged to answer the research questions, in the words of the participants:

1. "The Love-Hate Relationship": Most participants said their relationships with money were currently good or better, but others described stressed views of their financial lives, some of which may be circumstantial given the enduring effects of the pandemic on lower-income and frontline workers. Whether their opinions about money were positive or negative or in between, the participants viewed money and financial literacy as necessary.
2. "They're for Life": Participants shared the learnings that stuck with them through both pleasant and difficult memories. This theme's quote was uttered by a man who, as a fifth grader, shared a first-place win in an art contest. The portraits were displayed at the Cincinnati Fire Museum, and the participant was

"pumped about it." But the family did not have bus fare for him or his family to attend the ceremony. The participant said those are the lessons that stick with a person for life.

3. "Power is in the Money; The Money is in the Power": This theme became readily apparent as participants spoke of their experiences with credit, saving, and investing. Most viewed credit as an opportunity, for example, but they also viewed it as a "gift and a curse". There was a sense of power felt from having consumer credit, but it can be quickly overshadowed when the power of the creditor is exposed.
4. "You Gotta Be Legit, Bro": The desire for legitimacy—described by participants as trustworthiness, being respected, and self-respect—was particularly strong for those who grew weary of their former lives and being financially "illegitimate," as one participant framed it. Others noted that deciding to put aside distrust of financial institutions and depositing some money ultimately provided a sense of some security.
5. "My Legacy is Important to Me": Taking care of family and loved ones in terms of both money and financial knowledge surfaced as a priority. Although none of the participants benefited from inheritances, they shared the goal of trying to "ease the pain" of poverty by building some level of wealth now for generational bequests.

The experiences revealed by the participants shared common themes compared to the literature:

A Sense of Not Mattering. Especially as they related to early experiences of poverty, participant stories revealed subtle and deeply held beliefs of a personal lack of value or not mattering. The findings demonstrated how inequalities often lead to a sense of despair at never being able to attain the reward of financial success (Bonacich, 1989). The intersection of race, gender, and incarceration status located participants on the disadvantaged side of norms created to benefit dominant groups (Darity, Hamilton, & Stewart, 2014; Moore, 2019).

Giving Back and Moving Forward. A commitment to sharing wisdom as well as resources, today and with future generations, emerged from the interviews. The notion of leveraging the community cultural wealth of people of color (Yasso, 2005) was revealed as an essential bequest. This commitment was interwoven in the fabric of community—saving money for family, sharing knowledge with children and grandchildren, ensuring at least two good deeds are done each day, and giving a dollar to a known drug user in the neighborhood no matter how few dollars were available.

Financial Knowledge is Not Enough. Although schools were shown to be unreliable sources of personal finance training, several participants took part in financial literacy offerings while incarcerated and reported a positive impact from it. Aware of gaps in their knowledge, they shared a desired to build on what they learned in prison programs or after returning home. At the same time, financial knowledge was deemed insufficient to ensure financial stability and success. The "home" participants returned to was often in disadvantaged areas lacking in financial access, though predatory lending stores were abundant (Glidden & Brown, 2017; Jordan, 2018). Overall, participants expressed a willingness to enter or dive more deeply into existing financial systems with the support of financial coaching, despite a visceral distrust of such institutions.

Implications for Practice

Along with heightened concern for youth in Black communities in particular, participants identified a need for enhanced financial education for adults as well as young people. Several ideas were co-created by the participants, the co-researcher, and the principal researcher.

Topic-Specific Workshops. Participants suggested topic-specific workshops at trusted coaching organizations to learn more about how to leverage existing financial systems to achieve their wealth goals, while naming and acknowledging the historical distrust of financial institutions. Topics could range from basic banking procedures to an investing series. Because it is important to see one's reflection in all aspects of life including financial life, participants suggested intentionally centering Black banks, investment houses, insurance agents, and businesses that focus on the health and wealth of Black communities.

Community Collaboration. Participants expressed interest in co-conducting financial workshops at community sites and highlighting their voices and experiences as trusted community members and leaders. A fundamental step toward generational financial literacy and wealth is to equip young people, particularly in Black communities, with useful tools to navigate existing systems in ways that will help them achieve financial goals without falling into the historical and contemporary financial traps people of color often face.

Investment in Individuals. The solution with the most traction addresses both financial literacy and the lack of initial capital needed to participate in investing and entrepreneurship. Participants noted that although financial institutions and foundations may invest in economically depressed communities, the efforts are often too vague and do not benefit residents directly or build self-sufficiency. Instead, entities could invest a portion of money in structured and culturally savvy financial education programs, but earmark the bulk of the investment for significant grants for entrepreneurship and homeownership and other endeavors important to an individual. Low- or no-interest loans, grants, or dollar-matching programs could support homeownership (existing and new), education, investments, and other asset-building ventures directly for greater impact on individuals which enhances the health of communities.

Conclusion

This study's findings showed that participants have a working knowledge of personal finance, the desire and intention to learn more, and aspirations to use that knowledge to build their wealth and to pass it to future generations. Most of their financial knowledge was gained from families who did the best they could, and from life in neighborhoods that exposed them in large part to expensive, illegal, and predatory financial dealings. Little education occurred in formal school settings, which left the participants to piece together financial practices and behaviors that suited them for a period of time and in a particular space, but more often left them at a disadvantage once they chose new paths. It is with this inadequate toolkit that they approached financial wellness prior to incarceration and even after returning home.

People impacted by the legal system, particularly the Black men in this study, have a wealth of experience to share and could offer profound knowledge as a means of reclaiming and centering cultural strengths while disrupting the existing white-centric financial systems. In the personal finance realm covered by this study, those on this side of incarceration have a unique knowledge base and skillset that should be invited into larger spaces. Their wisdom can generate personal success at present and greater access to opportunities and resources for young people and future generations.

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Exploratory Study on Use of Visualizations in Informal Student Loan Borrower Education

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Abstract

This study used exploratory methods to analyze the results of two borrower education interventions done prior to the COVID-19 pandemic – one with embedded graphs (visualizations) in 2017 and another without embedded graphs in 2019. Matching participant data with enrollment and demographic information allowed the inclusion of sex, ethnicity, and parental support variables. Results of a logistic regression indicated embedded graphs did not have a statistically significant impact on borrowers declining or canceling their loans after the intervention. Students with parental support and Hispanic students were statistically more likely to decline or cancel student loans after participation in the intervention.

Keywords: borrower education, informal learning, online learning, student loans, visualizations

Background

According to Forbes, 92% of the $1.75 trillion in student loan debt held by Americans is federal (Hahn, 2023). Federal student loan payments and interest were paused in March of 2020 in the United States. As of this writing, the pause on payments and interest for federal student loans have been extended multiple times between 2020-2023 (U.S. Department of Education, n.d.). However, the pause will end and repayment obligations will resume, this time with a record number of borrowers entering repayment for the very first time simultaneously. Reflecting on prior borrower education interventions can provide insights when building scalable, meaningful education in the future, both for student loan borrowers and other adult learners. This study explores and compares two non-compulsory borrower education interventions done prior to the COVID-19 pandemic – one leveraging embedded, personally relevant graphs in summer of 2017 and another without embedded graphs that was housed in a learning management system.

Informal Learning Online

Informal learning has been empowered by the development and continually improving accessibility of the internet. Adults, in particular, can benefit from the vast array of learning resources that exist online. Surveys have shown 90% of Americans use the internet, a figure that has continued to rise since 2000 (Pew Research Center, 2019). And, those that don't use the internet are primarily over the age of 65 (Anderson, Perrin, Jiang, & Kumar, 2019). As globalization and advancements in technology continue to create new demands in a variety of industries, there is an increased need for workers to advance their knowledge and enhance job-related skills through informal learning which internet-based resources can facilitate, often at a lower cost than traditional means. Pandemic related lockdowns also highlighted the accessibility and cost-efficiency of online education.

Online materials used for self-directed, informal learning can include search engines, news sites, blogs, wikis, videos, maps, and more, with visual and text-based media that varies from posts with photos with captions to interactive tools with charts that can be directly manipulated by the user. The visualizations used in informal learning, especially online, can have significant impacts on attention, motivation, performance, and other cognitive factors related to learning. Understanding how visualizations impact learning in online environments as well as users' preferences when it comes to visual media is important for creating valuable experiences for self-directed learners that enhances engagement and motivation.

Literature Review

Research on visualizations in both informal and formal, online learning environments, still seems to be in its infancy. Visualizations' impact on motivation seems to be the most studied phenomena, but the context in which visualizations are used varies drastically in the research, making substantial contributions to best practices in their use difficult to ascertain.

Graphic Visualizations

The term visualization can include animations, charts, diagrams, graphs (both interactive and static), icons, illustrations, pictures (e.g., visual metaphors), tables, typography as well as other types of visual media. Visualizations have even been used as a means to enhance cognitive understanding as a tool (Pousman, Stasko, & Mateas, 2007), inspire us through art (Viegas & Wattenberg, 2007), explain relationships in multivariate graphs (Shah & Freedman, 2009) and more.

Because of the lack of clarity in the definition of visualizations beyond data visualizations, other applications of visual media are more difficult to identify and categorize. In this study, embedded graphs are the focus, but visual elements like buttons were used to guide the user experience by drawing attention to action items, like navigating to the Federal Student Aid website's borrower dashboard.

Informal Learning

Informal, or non-formal, learning often refers to learning that occurs outside of a classroom or any formal course where there is a recognized set of learning objectives. Informal learning can occur in museums, libraries, zoos, co-curricular experiences or programs, community centers or parks, and, of course, online (Lemke et al., 2015). Professional development is sometimes also categorized as informal learning, particularly if it is self-paced.

Research on Visualizations

There is quite a bit of research on the use of visualizations in formal education through online environments that can be leveraged along with the more elusive research that exists on the use of visualizations in informal contexts.

Formal Education

Through increased self-awareness and gamification methods, like digital badges, visualizations have been shown to impact motivation. The use of visualizations in learning management systems has been shown to increase participation in online courses (Auvinen, Hakulinen, & Malmi, 2015; Olsson, Mozelius, & Collin, 2015; Jin, 2017). Auvinen et al. (2015) conducted case studies on a Data Structures & Algorithms blended learning course during spring 2013 and spring 2014 that included log data and survey responses for the online component of the courses. In spring 2013, 254 students took the course which had digital badges as visualizations that were associated with time management, learning, and carefulness. In spring 2014, 215 students took the course which included heatmap visualizations correlating to learning performance. Using previously collected performance data, the individualized heatmap visualizations, which included information about how the user compared to other students who had taken the course, was provided to a random 50% of the students enrolled. With both badges and heatmap visualizations, high-performing students interacted most with the visualized feedback (Auvinen et al., 2015). *Mastery extrinsic* goal orientations and *performance approach* goal orientations captured with the Niemivirta's goal orientation survey instrument at the beginning of the course were more correlated with badges while *performance avoidance* goal orientation had a statistically significant correlation with heatmaps. However, the majority of students indicated neither badges nor heatmaps affected their behavior in the feedback surveys and few indicated the badges or heatmaps disturbed them.

Similar case studies were done by Olsson et al. (2015) where two different courses – one on game-based learning, and one on e-learning for university teachers – included three main types of visualizations: (1) progress meter visualizations in the Moodle learning management system, (2) visualizations to assist with recognizing the required course materials, and (3) animations to assist with learning concepts in the course content. Survey results and course participation metrics showed that progress bars were useful to most students, but most participants were indifferent to the badges. However, it is important to note that for courses that did not have college credit associated with them (i.e., nonformal), the badges were shown to be more effective in motivating participation.

Jin (2017) split 118 undergraduate engineering students taking a Creative Thinking course at a South Korean university into 3 groups to test the role of visualizations in collaborative online environments. A-type visualizations representing group participation and group interaction were provided to one group. Another group was given B-type visualizations representing group participation and individual participation. The third group, the control, was not given any visualizations representing online collaboration or participation. Metrics collected included online participation, perceived learning, perceived satisfaction, usability test (measured learnability, effectiveness, & satisfaction), students' opinions, and team project scores. The use of visualization tools increased the mean values of dependent variables, like "participations", interactions, login frequency, number of follow-up posts, and message length. Additionally, there was a significant effect on the number of messages read for the groups with visualizations compared to the control group without visualizations. The B-type visualizations, which had individually meaningful data represented in the visualizations, had significant effects on individual participation, peer interactions, login-frequency, number of follow-up posts, and message length compared to the other two groups. Most learners in the visualization groups felt the tools increased motivation through competition with their classmates, though the visualizations that had individually-meaningful data (B-type visualizations) were more effective in motivating students.

In each of the previously discussed case studies, the use of visualizations as a personally-meaningful feedback tool motivated online participation. This is helpful in the design of future educational endeavors and maintaining engagement in informal and formal online education.

Each of the previous studies leveraged visualizations embedded in online education in unique ways. However, all of the visualizations leveraged personally-meaningful or relevant data with the intent of influencing learners' engagement in online educational activities.

The research reviewed here on the use of visualizations in formal education is quite limited in its generalizability to formal and informal learning in that they are all case studies. More research with a broader diversity in age of participants would be helpful for addressing the needs of adult populations in both formal and informal education contexts. Additionally, looking more closely at the extrinsic vs intrinsic motivational value of badges may be helpful for understanding how badges can be leveraged in non-credit and informal education.

Informal Education & Learning Applications

The possible applications of visualizations to support informal education are very broad. Visualizations can be used to guide attention, increase self-awareness, motivate behavior, increase engagement, enhance user interface design for web-based and/or mobile usability, search information or learning resources, and more. Visualizations can be found in both physical and virtual applications for informal learning and behavior change. As previously discussed, individually meaningful data is most impactful for increasing motivation for participation in formal learning environments (Jin, 2017), which is consistent with visualizations created with the intention of behavioral change in informal contexts. Examples include graphs of an individual's activity to inform choices and assist with modifying one's own behavior, as in the quantified self movement (Choe, Lee, Lee, Pratt, & Kientz, 2014) or bullet journaling (Ayobi, Sonne, Marshall, & Cox, 2018).

The use of visualizations in work contexts can be particularly helpful in exploring how adult learners can benefit from their use in professional development. Godehardt (2009) launched a study to address whether or not "taking context information into account for knowledge or information visualization" enhances efficiency (saving time) and reduces mistakes for knowledge workers. Godehardt (2009) created a framework for developing a tool that provides context through 3 components: (1) context sensors, (2) visualizations, and (3) data sources. Based on that framework, a prototype was implemented that integrated into MS Outlook. The application provides a visualization of inter-related tasks, persons, and documents related to messages in Microsoft Outlook. A qualitative and quantitative user study was done by examining quality (user opinions), efficiency (time to complete tasks), and effectiveness (number of failures by the participants representing knowledge workers). PhD students or scientific staff members were cross-evaluated after being split into two groups and asked to complete three tasks: (1) find the corresponding person for a given job, (2) delegate a job to a person with high capacity (lowest workload), and (3) find a given document – once with the visualizations and once without. The tasks were slightly modified between scenarios to avoid accuracy based on repetition. All tasks were completed in a simulated knowledge-worker environment.

Godehardt (2009) found that visualizations of contextual information improves efficiency and effectiveness of knowledge workers trying to find a person for a given job or to delegate tasks. Most participants (63%) indicated the visualizations were very helpful. Based on the framework presented by Godehardt (2009), there was additional functionality identified that could be leveraged in the approach to supporting knowledge workers through visualizations, including the use of user interactions and open documents to detect relevant information present on the work device. Depending on the design of a visualization system like this, using it may have an initially steep learning curve, but it could eventually result in more work efficiency. Additionally, overcoming resistance to change while implementing any tool like this may be particularly challenging, especially if the context in which a knowledge worker or learner functions relies on data from the physical environment that cannot be easily captured or visualized through digital means.

Sumner et al. (2005) analyzed the cognitive strategies of users browsing digital libraries for materials to support learning and teaching when interactive concept map visualizations are present. The small pilot study was conducted with twelve undergraduate psychology students consisting of 6 male and 6 female students. Half of the participants used an existing version of the Digital Library for Earth System Education (DLESE) search engine while the other half of the participants used a version enhanced with interactive concept map visualizations. All participants were

asked to do a series of tasks as though they were middle school teachers preparing for a class while explaining their thought processes. The 45-60 minute audio recordings of the verbal self-explanations were converted to 110 pages of transcripts which two researchers reviewed for themes. They found that the group who had concept map visualizations in the search engine leveraged the visualized browsing interface as a “tool rather than a learning device”. They also used benchmarks identified in the search engine interface to guide their decision-making as they leveraged the tool. The group who used the DLESE search engine without the concept map visualization spent a lot of time trying to develop search terms from the tasks they were given which limited their success.
From the research on the informal uses of visualizations, it’s clear that the integration of visualizations of data and contextual information can influence how users navigate digital environments as well as improve performance for specific types of tasks which has utility in online work and learning environments. However, it is important to focus on the goal of the visualization when embedding it into education or conducting future research since, as seen in the Sumner et al. (2005) study, a visualization intended to support learning may be better suited as a tool to navigate a learning environment instead.

Considerations in Design & Use of Visualizations

When determining the utility of visualizations in adult, informal education, recognizing their cognitive and utilitarian value cannot be understated.

Cognitive Load Theory

Because of the way that our brains process information while learning (both auditory and visual simultaneously, as observed in cognitive load theory), using multiple modes of educational media delivery (verbal and non-verbal) is often beneficial (Moreno and Mayer, 2007; Cook, 2015), but there are multiple factors to consider when designing educational interventions that use both verbal and non-verbal (or visual) modes. Both design (by educators/designers) and interpretation (by users) is important for creating visualizations or graphics that can be easily understood by target audiences (Cook, 2015), especially if there are multiple representations (Schnotz & Kürschner, 2008).

Visualizations created for the intention of supporting learning should be designed with the following in mind: prior knowledge, multiple representations, dual-mode instructional design, split-attention and modality effects.
Prior knowledge impacts what kind of visualizations can be paired with verbal (narration, written text, etc.) information to maximize learning and get the most out of interpretation by the learners (Moreno and Mayer, 2007; Godehardt, 2009; Cook, 2015). This is often represented in research comparing novice to expert learners. Unfortunately, as noted by Godehardt (2009), there is little research comparing learners across the spectrum, so tailoring visualizations to a specific target group or maximizing visualizations to meet the needs of a broad and diverse audience is challenging. Since novices often have fragmented or minimal knowledge in a subject area, visualizations either with or without context, are interpreted with focus on superficial features, which is a drawback to using visualizations without first providing a baseline/foundational understanding of the concepts being represented since it can overwhelm working memory. Experts are able to use existing schemas and underlying domain knowledge to interpret visualizations which allows for transfer of knowledge and better performance on transfer type tasks, however, simplified visuals created to cater to novice learners can impede learning for experts (Cook, 2015).

When it comes to informal education, it is hard to assess whether your learners are novices or experts without embedding self-selection tools into the online learning environment. This recognition makes it ever more important to establish and incorporate best practices in the selection and design of educational visualizations in online contexts.

Multiple representations of concepts are often used in instructional design efforts intended to provide additional insight into the relationships between complex information. Research on visual representations have been found to have an effect on mental models and performance; however the inclusion of new external representations during testing reduced the effect (Schnotz & Kürschner, 2008). Because of the cognitive load required to switch between these multiple representations, educators and instructional designers should consider showing related visualizations together (Cook, 2015). Theoretically, it’s also important to keep colors, line weight, and other design features consistent to reduce cognitive overload.

Dual-mode instructional design efforts allow learners to both see and hear information presented through multiple modalities, which is "more beneficial than presentations that rely on either visual or verbal information alone" (Cook, 2015). It's important to recognize that educators and designers should not try to use visualizations alone to enhance learning, but it may be useful for inspiring interest in a wellness domain as a marketing tool for informal educational outreach. Dual-mode delivery is best achieved when the material is provided in a complementary fashion, simultaneously or close together, to avoid split-attention effects.

Split-attention effects when visual and verbal material are not intentionally organized to complement each other (Cook, 2015). As a result, cognitive overload can result since the learner is required to hold either verbal or visual information in working memory while searching for the complementary information. A study on interactive anatomical visualizations noted that split-attention effects can occur in instances where many labels are needed to understand a visualization and numbers or letters must be kept in working memory to reference a label key (Khalil et. al, 2005). A few ways of alleviating this is to "present related material contiguously in space and time" and improve search time by color coding elements, but, ultimately, research suggests avoiding split-attention designs to "prevent cognitive load problems" (Cook, 2015).

Another method of alleviating cognitive load issues from split-attention designs is to consider the modality effect. For example, "when two sources are unintelligible in isolation, presenting verbal information through narration rather than text is advantageous" (Cook, 2015). There are different reasons you may use alternative modes of delivery other than to avoid split-attention effects (e.g., when audio is too long or complicated, when presentation is too quick or complex, when information is presented quickly and cannot be repeated).
If it is challenging to understand dual-mode presentations because the information is difficult to understand or "unintelligible", repeating information can help with learning, but, if the information is presented well initially, it is best to avoid repetitive content (Cook, 2015).

Since there is such a variance in optimal visualization delivery for novices compared to experts, it is critical to understand your target audience's prior knowledge and perception needs before creating visualizations. Other factors that may influence learning include spatial ability, cognitive ability, and developmental level (Cook, 2015). One suggestion for the use of visualizations is consistent with what is observed in quantified self and bullet journaling: to support social learning in a community (Cook, 2015). Individuals engaging in the quantified self movement create visualizations from the data they've collected on themselves and often share those visualizations within a community, either online or in person (Choe, Lee, Lee Pratt & Kietz, 2014). Additionally, those that practice bullet journaling may also share the results of their data collection & visualizations with a community online, like Instagram (Ayobi, Sonne, Marshall, & Cox, 2018). In this way, the creation of visualizations is not just a catalyst for behavior change; it is also a vehicle for social learning and interaction. Alternatively, you could have learners create their own visualizations as an educational activity which can be used as an assessment tool.

Gestalt Psychology & Angulation in Shapes
In a study conducted with college students on the preferences for certain shapes with different visual groupings, Kim & Fritsch (2019) created four documents containing stimuli using pairs of shapes manipulated with Gestalt grouping principles in mind – proximity, similarity, common-fate, and depth. The materials were named by how pairs of squares, triangles, and circles were arranged, including "clustered", "scattered", "shaped", and "aligned". All participants were shown the stimulus materials in the same order and given five minutes or less to circle their top three preferences of the grouped shapes. They found the pair of circles with varying sizes and angulation (common-fate in Gestalt theory) were the most popular choice (45%). The second most popular pair were triangles facing each other in a downward arrow position (40%). In the clustered material, where pairs of shapes were all placed in close proximity, participants could still distinguish all pairs of shapes distinctly. Of all stimulus materials, the pair of circles were the most popular (43%), followed by the pair of triangles (36%), and squares (21%). Of the circles chosen, 84% had angulation, while 60% of triangles had angulation, and 33% of squares had angulation. Overall, 64% of all shape pairs had angulation. Squares and small pairs were least likely to be selected.

The generalizability of this study is rather limited given that it was only done with 55 participants described as 51% white Americans and 49% Asians above the age of 20 with normal vision. It's also unfortunate that such a recent study on visualization and attention did not leverage the use of eye-tracking since the intention of the study claimed to want to investigate what the viewer actually paid attention to first, not solely preferences. If another metric included an observation by the researchers of which pair of shapes each participant selected first, that might have provided more compelling results for this particular study.

Despite the limitations, Kim & Fritsch's (2019) results may suggest viewer's preferences for angulation can be leveraged for guiding visual attention in visualizations intended to enhance learning, particularly if there are other groupings of shapes being represented. As Kim & Fritsch (2019) also point out, this type of research can be useful in better understanding how images are recognized based on Kosslyn's (2005) process of building a "visual image" or mental picture. More research on shape and orientation preferences' roles in guiding attention is needed to provide more substantial evidence for best practices in the selection of shapes or the use of angulation in specific types of educational visualizations.

User Experience Design

Goals.

Research on experience goals and user interface design produces some interesting considerations for the design of visualizations and even the visual layout of online learning environments that can be leveraged in the design of informal education and outreach.

For example, Jokinen, Silvennoinen, and Kujala (2018) developed and tested a model using appraisal theory of emotion and the theory of predictive processing with the following three hypotheses confirmed through the study: (1) The degree to which a person prefers a visual element is correlated to the time it takes for them to appraise the element, (2) Prior exposure to a stimulus impacts how the element is appraised by an individual, and (3) Prior exposure can impact how cues are used to evaluate or pay attention to different areas of a stimulus. Forty participants with a mean age of 30 years were recruited with normal or corrected-to-normal vision to participate in an eye-tracking study in a quiet lab with controlled lighting. Participants were asked to respond to stimuli over 525 unique trials. Each trial presented 2 of 7 web pages with the same content but different designs paired with 1 of 25 adjective cues. The adjective cue was shown for 2 seconds before the stimulus-pairs were shown for the participants. Participants were asked to select which of the stimulus-pair websites they preferred given the adjective cue that was provided.

Based on the results of the Jokinen, Silvennoinen, and Kujala (2019) study, designers of online media (e.g., visualizations, websites) can use some of the methodologies described to determine if there is a correlation between their designs and what goals they want to achieve with their users. Ultimately, "[In appraisal theory,] emotional response depends not only on the perceived stimulus but also on the subject who encounters it and on the circumstances of the encounter." (Jokinen, Silvennoinen, and Kujala, 2019, p. 381)

With digital environments for learning, both designers and educators typically have a very specific goal of encouraging learning. If leveraging commercial digital environments (e.g., social media), consider the prior experience of the intended learners and the motivations for visiting the commercial site to align learning goals with the user's experience expectations and goals. When making design decisions, using adjective cues that align with the learning goals of the project when conducting user testing would be useful, according to the results of the research by Jokinen, Silvennoinen, and Kujala, 2019).

Accessibility.

The use of visualizations may limit accessibility, but there are tools that can help address the needs of differently-abled learners (Konecki, LaPierre, and Jervis, 2018). Examples of these types of tools include multimodal graphs, pie chart sonification, MultiVis, BATS, Graph Builder, TACTICS, 3D Shapes Visualization, exPLoring Graphs, VizTouch, MathTalk, Highcharts, SAS Graphics Accelerator (Konecki, LaPierre, and Jervis, 2018).

Some guidelines outlined by Konecki, LaPierre, and Jervis (2018) for increasing accessibility of visualizations include (1) simplifying data graphs, (2) choosing colors that are simple and distinct from each other, (3) minimizing the number of colors, and (4) enlarging all elements and fonts. A good rule of thumb from a design perspective is to make your visuals distinct enough that they can be recognized easily as just black and white or grayscale print-outs. If an instructional design tool is used that is optimized for accessibility, informing students of it is important for increasing its usage.

Additionally, research with older adults, a population that would benefit greatly from visualizations that value accessibility, has shown opportunities with the use of visualizations of health information to inform choices (Le et al., 2018). However, after analysis of 21 semi-structured one-on-one interviews conducted with older adults (average age of 70.5), there are certain design considerations that should be implemented in any visualizations created to address healthy behavior change (Le et al., 2018). Some of the suggestions Le et al. (2018) provided for increasing the utility of health visualizations for older adults included: (1) integration of recommendations within the visualizations on how to improve health, (2) the use of annotations to provide context, (3) multi-modal representation options (i.e., paper printouts), (4) allowing manipulation of time frames to show longitudinal changes, and (5) control over what information could be shared and the degree of access that can be provided. Most of these suggestions relate to the design of interactive data visualizations or platforms, but the use of visualizations within digital environments will increase their usefulness as educational tools that can better inform choices across many aspects of well-being.

In the context of financial education, it may be challenging to embed financial recommendations within a visualization to improve financial well-being without additional input from the user and guidance from trained financial planners. Legislative and market changes occur rapidly in financial contexts which may produce liability concerns for educators that try to embed specific types of recommendations (e.g., retirement planning, tax-preparation, debt repayment). However, the control over what information could be shared and degree of access is extremely relevant to data security concerns across all types of wellness education topics, but particularly relevant for finances.

Accuracy of Multimedia Comprehension.
Solely providing visualizations will not necessarily increase learning or comprehension of content. In a study by Mudrick et al. (2019), thirty-two undergraduate students between 18-27 years old participated in a study to evaluate the role of metacomprehension, or the role that self-regulation of comprehension, can play in learning complex topics (science) from multimedia materials (visualizations and text) that have conceptual discrepancies. Researchers used a combination of a 32 item science test, a 12 item test on graphs, demographic information, and 12 multimedia science content slides. Participants were also asked to respond to an inference question as well as answer a question about ease of learning for each item reviewed during the trials. The items (slides) presented to participants contained either no discrepancy between visual and text, a discrepancy between the text and the visual, or a discrepancy located within the text itself. Regardless of where the discrepancy was, the findings showed that "learners may not be able to accurately monitor their understanding of multimedia content that contains discrepant information" (Mudrick et al., 2019, p. 233).

The implications for inaccurate representations either in supporting text or visualizations themselves can be extremely detrimental to learning. And, in the case of informal financial education, that misinterpretation could have lifelong negative impacts on financial well-being.

Summary of Research
Visualizations derived from personally-meaningful data can motivate behavior (Auvinen, Hakulinen, & Malmi, 2015; Ayobi et al., 2018; Choe et al., 2014; Jin, 2017; Olsson, Mozelius, & Collin, 2015). However, it's important to recognize that conceptual understanding, even related to individual choices or current behavior, may not impact future behavior.

Additionally, visualized representations of contextual factors can improve efficiency and effectiveness of knowledge workers (Godehardt, 2009), while visualizations can also be used as a tool to increase efficiency when searching for educational resources (Sumner et al, 2005). Visualizations can help streamline cognitive processes in a way that allows learners to focus on what they're doing, like learning, while accessing relevant contextual information. Inclusive user-centered design is a great way to make sure visualizations used for learning are meeting the diverse needs of adult learners by being inclusive. Increasing accessibility of visualizations and visual designs is important to supporting social justice initiatives. And keeping in mind the changing needs of adult learners can be helpful for continuing the usefulness of visualizations as adult learners age.

Financial education explicitly can benefit from visualizations that leverage personally-relevant data, guide attention to relevant tasks, maintain interest and motivation to complete the educational intervention, and support motivation for longer-term behavioral changes associated with an individual's finances.

Ultimately, more research is needed on the role that visualizations can play in supporting adult learning in online environments, particularly for informal education. As technology changes and the way we consume information through different types of media evolves, it will be ever more important to address topics like ethics, cognition, accessibility, attention, motivation, and behavior in general in the development and use of visualizations and user experience design research.

Visualizations, both graphic data visualizations and visual metaphors, can play an important role in helping to improve learning. When it comes to the use of visualizations in informal educational outreach, very little research has been published on the behavioral impact of online interventions with adults, particularly since it can be difficult to measure. Evaluating the use of visualizations in financial education outreach provides a valuable opportunity to research the potential impact visualizations can have on co-curricular educational outreach, adult engagement in online learning, and student loan borrowing behavior, financial attitudes, and knowledge.

Methods

Taking a retrospective approach to understanding the impacts that visualizations can have in motivating future financial behaviors can be a valuable effort in understanding their use in financial education. With this in mind, results of borrower education interventions done in summer of 2017 and fall of 2019 were paired with data student account, authorized payer (representing parental support), and demographic data following Institutional Review Board approval to explore the potential relationship between the use of embedded graphs of borrowing trends for bachelor degree recipients of the participants' university and whether or not borrowers decline or cancel aid in the year following participation in the intervention.

Background

Since Fall 2014, a large university system in the Midwest has hosted a semiannual educational campaign called Know What You Owe for students who received a student loan. In Fall 2018, the campaign was moved into the Moodle learning management system. Prior to this transition, content was contained in separate campus-specific quizzes using an internally developed web application.

Participants

Prior to data matching and cleaning, there were 166 unique participants in the Summer 2017 Know What You Owe campaign and 209 unique participants in the Fall 2019 Know What You Owe campaign (N= 375). After matching ethnicity, sex, and authorized payer information to the participant responses, a total of 330 participants remained. Of the remaining participants for both groups, 33% had Authorized Payers, 66.1% were female (as identified by school enrollment data). Additionally, 49.7% were white, 17.9% were Hispanic, 17.0% were Asian, 11.5% were Black or African American, 2.7% were Multi-Race, 0.9% had unknown ethnicities, and 0.3% were American Indian or Alaska Native.

Design

The intervention being evaluated was not designed with a research study in mind. It was designed to teach borrowers to find information about their student loans and encourage them to take steps to monitor borrowing throughout their academic career. The Know What You Owe campaign was originally designed to emulate the impact of Indiana University's Debt Letters (Lorin, 2014). Despite not being explicitly designed as a research intervention, there are some important differences between the two Know What You Owe campaign periods that made them well-suited to compare in an exploratory study. See Table 1.

An additional difference between the two campaign periods included the recruitment method for participation. To test the additional barrier of needing to enroll in the Moodle course in fall 2019, an A/B test was performed to see if pre-enrollment vs self-enrollment made a difference in participation rates. Since this study focused on only those that participated, pre-enrolled vs self-enrolled data in Fall 2019 was excluded from the analysis.

Duration

The campaign periods for Summer 2017 and Fall 2019 ran roughly 2 months – June through August in Summer 2017 and November 2019 to January 2020 in Fall 2019. Depending on how well the participants knew their own student loan information or department of education login details, it could take 10 minutes to an hour to finish the intervention. Log data for Summer 2017 was not available to calculate average time spent on the quizzes so it was not included in the Fall 2019 data set. Additional log file details for fall 2019 participants were also excluded but may be valuable for future exploration.

Results

Logistic regression was used to analyze the relationship between the presence of embedded graphs in a student loan education intervention, having an authorized payer (parental support), sex, and ethnicity on a borrower declining or canceling student loans following participation in the Know What You Owe educational intervention. The logistic regression model was statistically significant, X^2 (7, N = 330) = 21.324, p = .003. See Table 2 for details. Embedded graphs did not have a statistically significant impact on borrowing behavior.

Holding all other predictor variables constant, it was found the odds of declining or canceling student loans increased 161% (95% CI [0.34 , 1.58]) for students with an authorized payer. Additionally, holding all other predictor variables constant, the odds of declining or canceling student loans increased 156% (95% CI [0.17 , 1.71]) for Hispanic students.

When examining the individuals who agreed to data matching, nearly two-thirds were graduate students, with the remaining third being almost entirely undergraduate students. Table 2 summarizes student enrollment levels for those that agreed to a data match (n = 235).

Discussion

There were many limitations to this study. As with any informal, non-compulsory educational intervention, there are several factors that can challenge the results of a study. This particular research endeavor used historical data that was not collected with the intention of empirical review. This made both data cleaning and analysis more challenging.

Since similar graphs in fall 2019 were available within the Moodle learning management system but outside the survey, this could have also contributed to split-attention effects if borrowers referenced the average indebtedness of bachelor degree recipients at their institution when looking up their own student loan balances.

Additionally, this study was susceptible to a significant level of self-selection bias due to the nature of the Know What You Owe interventions. An interest in personal finance may make a borrower more likely to participate in education related to student loans, for example. Additionally, the timeliness of the educational intervention can also impact willingness to participate. Student loan borrowers who may have graduated or left school and already know how much they owe and the details of their repayment responsibilities.

Pilot analyses of early versions of the Know What You Owe campaign had shown a correlation between students that complete the intervention and the reduction of in-school student loan borrowing when compared to a sample of non-participants. However, that correlation does not necessarily mean that the education is what prompted the change in behavior. Since participation is and always has been voluntary for Know What You Owe, it could mean that the population willing to participate in borrower education is more likely to have an aversion to debt, make changes to their student loan borrowing habits, or be more aware of their borrowing habits and how to manage student loan debt in general.

Borrowers who had parental support (an Authorized Payer) were more likely to decline or cancel student loans following participation in the Know What You Owe intervention. Considering the financial support often provided by parents, this is consistent with what you'd expect for traditional college students. Sallie Mae's How America Pays for College report indicates as much as 43% of the cost of college is covered by parents' income and savings (2022). However, it is important to recognize that this is mostly relevant for traditional-age students. Non-traditional, first-generation, and minority students may be less likely to have parental support that can fund such significant portions of college-related costs.

Hispanic students having an increased tendency to decline or cancel student loans following participation in the Know What You Owe intervention is consistent with prior research on debt aversion for Hispanic populations (Cunningham & Santiago, 2008). Prior research has also indicated that this debt aversion for Hispanic and Asian students is persistent regardless of unmet need, income, institution types, enrollment levels, and more. (Cunningham & Santiago, 2008). Culturally inclusive and thoughtful content design is important to avoid students in this category making changes to their borrowing behaviors that could negatively impact quality of life, basic needs security, and ultimately persistence in school. When a student avoids borrowing when they have substantial unmet need, it can result in other financial vulnerabilities that could be dangerous (e.g., food insecurity, homelessness, etc.). Additionally, prior research on racial differences in parents' perceptions of paying for college indicated Hispanic parents are more likely to indicate children will be able to earn money for college on their own (Warnock, 2016). This expectation may reduce the chances of Hispanic students to ask parents for financial help or communicate financial need to their families.

Although this study did not provide clear insights into the utility of embedded graphs in student loan education, there is opportunity for further research, particularly as the need for scalable borrower education interventions increases.

Conclusion

Future research on student loan borrower education should take an intentional approach to research design and comparisons of intervention details (e.g., user experience design, recruitment, visualization types and relevance). There are many areas of the informal education process that could benefit from intentional review. For example, looking at how the differences in recruitment processes may motivate participation in non-compulsory interventions may give insights into how to market programs for the highest likelihood for participation. Additionally, designing studies to look at aspects of user experience design that draw attention to specific content, allow for individual control over user preferences in the experience, and how relatable any graphs or visuals are to encourage connection with the content may be helpful. In future studies, survey completion and log data should also be leveraged to inform the evaluation of nonformal, voluntary borrower education conducted online. Longitudinal studies would also be helpful for interventions designed to influence behavior, particularly financial, as this is a much more complicated type of behavior with multiple influencing factors (socioeconomic status, financial crises, income disparities, medical debt, etc.).

References

Anderson, M., Perrin, A., Jiang, J., & Kumar, M. (2019, April 22). 10% of Americans don't use the internet. Who are they? Retrieved November 3, 2019, from https://www.pewresearch.org/fact-tank/2019/04/22/some-americans-dont-use-the-internet-who-are-they/

Auvinen, T., Hakulinen, L., & Malmi, L. (2015). Increasing students' awareness of their behavior in online learning environments with visualizations and achievement badges. *IEEE Transactions on Learning Technologies*, *8*(3), 261-273.

Ayobi, A., Sonne, T., Marshall, P., & Cox, A. L. *(2018).* Flexible and mindful self-tracking. *Proceedings of the 2018 CHI Conference on Human Factors in Computing Systems - CHI 2018.* https://doi.org/10.1145/3173574.3173602

Choe, E. K., Lee, N. B., Lee, B., Pratt, W., & Kientz, J. A. (2014). Understanding quantified-selfers' practices in collecting and exploring personal data. *Conference on Human Factors in Computing Systems Proceedings*, 1143.

Cook, M. P. (2006), Visual representations in science education: The influence of prior knowledge and cognitive load theory on instructional design principles. Science Education., 90: 1073-1091. doi:10.1002/sce.20164

Cunningham, A. F., & Santiago, D. A. (2008). Student aversion to borrowing: Who borrows and who doesn't. *Institute for Higher Education Policy*.

Godehardt, E. (2009). A framework for contextualized visualization supporting informal learning. *International Journal of Advanced Corporate Learning (iJAC)*, *2*(3), 21-26.

Hahn, A. (2023, March 24). *2023 student loan debt statistics: Average student loan debt*. Forbes. Retrieved April 22, 2023, from https://www.forbes.com/advisor/student-loans/average-student-loan-statistics/

How America Pays for College, 2022: Sallie Mae's National Study of College Students and Parents. (2022). *Sallie Mae Bank*.

Jin, S. H. (2017). Using visualization to motivate student participation in collaborative online learning environments. *Journal of Educational Technology & Society*, *20*(2), 51-62.

Jokinen, J.P., Silvennoinen, J., & Kujala, T. (2018). Relating experience goals with visual user interface design. *Interacting with Computers*, *30*(5), 378-395.

Khalil, M. K., Paas, F., Johnson, T. E., & Payer, A. F. (2005). Design of interactive and dynamic anatomical visualizations: the implication of cognitive load theory. *The Anatomical Record Part B: The New Anatomist: An Official Publication of the American Association of Anatomists*, *286*(1), 15-20.

Kim, J., & Fritsch, M. H. (2019). For visual attention: Are there any tendencies in form interpretation?. *Visible Language, 53*(2).

Konecki, M., LaPierre, C., & Jervis, K. Accessible data visualization in higher education. (2018). *2018 41st International Convention on Information and Communication Technology, Electronics and Microelectronics (MIPRO), 2018 41st International Convention*, 0733.

Le, T., Chi, N. C., Chaudhuri, S., Thompson, H. J., & Demiris, G. (2018). Understanding older adult use of data visualizations as a resource for maintaining health and wellness. *Journal of Applied Gerontology, 37*(7), 922-939.

Lemke, J., Lecusay, R., Cole, M., & Michalchik, V. (2015). *Documenting and assessing learning in informal and media-rich environments*. MIT Press.

Lorin, J. (2014, July 7). *Indiana University's debt letters cut student borrowing*. The Indianapolis Star. Retrieved April 22, 2023, from https://www.indystar.com/story/news/education/2014/07/06/indiana-universitys-debt-letters-cut-student-borrowing/12277277/

Moreno, R. & Mayer, R. (2007). Interactive multimodal learning environments. *Educational Psychology Review, 19,* 309-326.

Mudrick, N. V., Azevedo, R., & Taub, M. (2019). Integrating metacognitive judgments and eye movements using sequential pattern mining to understand processes underlying multimedia learning. *Computers in Human Behavior*, *96*, 223-234.

Olsson, M., Mozelius, P., & Collin, J. (2015). Visualization and gamification of e-learning and programming education. *Electronic Journal of e-Learning, 13*(6), 441-454.

Pew Research Center. (2019, June 12). Demographics of Internet and Home Broadband Usage in the United States. Retrieved November 3, 2019, from https://www.pewresearch.org/internet/fact-sheet/internet-broadband/

Pousman, Z., Stasko, J., & Mateas, M. (2007). Casual information visualization: Depictions of data in everyday life. *IEEE transactions on visualization and computer graphics*, *13*(6), 1145-1152.

Schnotz, W., & Kürschner, C. (2008). External and internal representations in the acquisition and use of knowledge: visualization effects on mental model construction. *Instructional Science*, *36*, 175-190.

Shah, P., & Freedman, E. G. (2011). Bar and line graph comprehension: An interaction of top-down and bottom-up processes. *Topics in cognitive science*, *3*(3), 560-578.

Sumner, T., Ahmad, F., Bhushan, S., Gu, Q., Molina, F., Willard, S., Wright, M., Davis, L. & Janée, G. (2005). Linking learning goals and educational resources through interactive concept map visualizations. *International Journal on Digital Libraries*, *5*(1), 18-24.

U.S. Department of Education. (n.d.). Federal Student Aid. Retrieved April 1, 2023, from https://studentaid.gov/announcements-events/covid-19

Viégas F.B., Wattenberg M. (2007). Artistic Data Visualization: Beyond Visual Analytics. In: Schuler D. (eds) Online Communities and Social Computing. OCSC 2007. Lecture Notes in Computer Science, vol 4564. Springer, Berlin, Heidelberg).

Warnock, D. M. (2016). Inequalities at the outset: Racial, ethnic, and socioeconomic differences in parents' perceptions of paying for college. *Journal of College Student Development*, *57*(5), 503-521.

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Table 1. Comparison of Survey Changes

Detailed differences in interventions:	Summer 2017	Fall 2019
Recruitment	Targeted all students who received a loan in Fall 2016, Spring 2017, or Summer 2017	Targeted all students who received a loan to their account in Fall 2019
Survey tool	3 separate surveys using an internal web-based survey	1 survey for all recipients; located in Moodle
Graphs	Embedded in survey/quiz	Located in Moodle but outside survey (not embedded)
User Experience Integration	Included embedded graphs, buttons & screen-shots for finding personal student loan debt	*Only* included buttons & screen-shots for finding personal student loan debt
Student loan response options	Fields allowed entry of specific debt amounts	Survey used debt load ranges for data protection

Table 2. Logistic regression model of predictors of decline/cancel student loans

Variable	β	S.E. B	Wald χ^2	Exp(β)	*p*
Treatment (Embedded Graphs)	-.018	.271	.005	.982	.946
Authorized Payer	.958	.317	9.132	2.606	.003
Female	.097	.285	.116	1.102	.733
BlackAfricanAmerican	.372	.401	.864	1.451	.353
Hispanic	.941	.392	5.775	2.563	.016
Asian	.710	.406	3.052	2.033	.081
MultiRace	1.276	1.086	1.378	3.581	.240
Constant (Decline/cancel loans)	.300	.325	.851	1.349	.356

Note. Total $N = 330$; Sample $N = 314$.
* Due to the small number of participants, American Indian and Alaska Native ethnicity was excluded from the regression analysis.

Financial Perceptions, Financial Literacy, and Financial Behaviors Among Young Adults aged 18-34

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Background

Young adults aged 18-34 face more financial challenges to securing their financial futures than any previous generation (Peter G. Peterson Foundation, 2022). Larger debt loads, high inflation rates, longer lives, less Social Security, and disappearing pensions will make it harder for young adults to move smoothly through unexpected financial challenges and live comfortably now and in the future (Duggan, 2022; Fisher, 2017; Horymski, 2023; Medina et al., 2020; Social Security Administration, 2022). In addition, young adults are not practicing the financial behaviors necessary to shield them from life's financial stressors, let alone prepare for long-term financial needs (Kim et al., 2019). Many young adults may not even have the necessary financial literacy to handle these needs (Xiao et al., 2015) and some may not know that the burden is now on their shoulders (Lusardi & Mitchelli, 2007).

Due to the many financial obstacles facing young adults, it is not surprising that they often have negative perceptions about their financial situations which induce worry and anxiety (National Foundation for Credit Counseling, 2020). One would think that teaching young adults about good financial behaviors, such as how to budget, save, and invest, would be enough to make them capable of meeting these financial challenges, but often it is not (Huston, 2010). Even when young adults are taught financial knowledge and have the ability to apply that knowledge, the way young adults perceive their financial situations and the resulting anxiety have also been found to impact the actual implementation of healthy financial behaviors (Archuleta, et al., 2013).

Purpose and Research Questions

The main purpose of this study is to examine the association between financial perceptions and financial behaviors among young adult, while taking into account unexpected financial events (stressors) that could impact the association. This study also examines the association between financial literacy and financial behaviors among young adults. The findings of this study can contribute to growing evidence that young adults lack crucial financial literacy and financial behaviors that will contribute to their current and future financial well-being. Though improved education can be helpful in the cognitive domain, the findings of this study also are expected to show that psychological financial perceptions also play a significant role in young adult financial behaviors.

Based on this literature, this study presents the following research questions:
Q1: What is the association between negative financial perceptions and positive financial behavior?
Q2: What is the association between financial literacy and financial behaviors?

Methodology

Data and Sample. This study employed data from the 2021 Investor Education Foundation's National Financial Capability Study (NFCS) to explore the associations between financial perceptions, financial stressors, financial capability, and financial behaviors among young adults aged 18-34. For the purpose of this study, we excluded those who did not answer the survey questions related to our three research questions. The final study sample included 1,710 young adults.

Variables. To measure financial perception, we included four variables: how much respondents worry that they won't have what they want in life, believe that they are just getting by financially, worry that their money won't last, and feel anxiety when thinking about their finances. To measure financial stressors, we included four variables: their experiencing an income drop, a job loss due to COVID-19, difficulty covering expenses and paying bills, and experiencing debt collection calls. To measure financial literacy, this study included three variables: subjective financial knowledge, objective financial knowledge, and perceived financial capability. To measure financial behaviors, we utilized four short-term variables: having an emergency fund, spending less than income, having a savings account, and always paying off credit cards. We also utilized four long-term variables: having figured out retirement needs, having a retirement plan, regularly contributing to a retirement account, and having investments outside of a retirement account.

Analysis. To examine financial perceptions, financial literacy, and financial behaviors among young adults, we performed chi-square tests of significance. We also conducted a OLS regression analysis to investigate associations between financial perceptions, financial literacy, and financial behaviors among young adults aged 18-34.

Results

Descriptive Results. The majority of young adults aged 18-34 are experiencing negative financial perceptions. Most feel like they will not have the things they want in life, that they are just getting by financially, and that their money won't last. In addition, on a financial anxiety scale of 1-7, young adults averaged a 5.0. A quarter or more of young adults are dealing with the financial stressors of income drops, job loss, difficulty making ends meet, and having debts in collection.

In the area of financial literacy, young adults aged 18-34 were found to have a mean of 5.4 in their subjective financial knowledge on a scale of 1-7; however, young adults only scored an average of 4.1 accuracy on objective knowledge subjects. The young adult objective knowledge variable included six questions: one on simple interest, one on inflation, one on bonds, one on mortgages, one on stocks, and one on compounding interest on a loan. Correct responses were averaged. When asked about their perceived financial capability to deal with day-to-day financial matters, such as checking accounts, credit and debit cards, and tracking expenses, young adults aged 18-34 reported a mean of 5.8 on a scale of 1-7.

As for financial behaviors, a high majority of young adults aged 18-34 have set aside an emergency or rain-day funds that would cover expenses for 3 months; have a savings account, money market account, or CD; always pay their credit cards in full; have figured out their retirement needs; have a 401k retirement account or IRA; and regularly contribute to a retirement account. Almost half also report that they have investments outside of their retirement accounts. However, about half of the of the study sample reported that their spending over the last year was more than their income.

Multivariate Results. The Ordinary Least Squares (OLS) results showed that financial perceptions were significantly associated with financial behaviors among young adults age 18-34. Those who reported that they were just getting by financially tended to practice lower levels of positive financial behaviors than those who reported that they were not just getting by financially. Likewise, those with higher levels of financial anxiety tended to practice lower levels of positive financial behaviors than those with lower levels of financial anxiety. However, worrying that money will not last and that one will never have the things one wants in life were not significantly associated with financial behaviors.

The OLS results showed that all three variables of financial literacy were significantly and positively associated with practicing positive financial behaviors among young adults aged 18-34. Specifically, as the levels of subjective financial knowledge increased, the levels of positive financial behaviors increased. Similarly, those who answered more objective knowledge financial quiz questions correctly tended to practice higher levels of positive financial behaviors. In addition, young adults who reported that they were good at dealing with day-to-day financial matters tended to practice higher levels of positive financial behaviors compared to those who reported that they were not.

Conclusion/Implications

The findings of this study contribute to a better understanding of the financial perceptions, financial literacy, and financial behaviors of young adults aged 18-34. Though the majority of young adults aged 18-34 report practicing positive financial behaviors, the majority of them also report that they are spending more than their income. This indicates that they may be saving for emergencies and retirement, but if they are going into high debt for housing or high standards of living, their retirement funds may not last.

This study found that relationships do exist between financial perceptions and financial behaviors among young adults age 18-34. The negative perceptions of just getting by financially and financial anxiety were negatively associated with positive financial behaviors while controlling for financial stressors. However, worry about never having the things they want in life and worry about money that they have or will won't last were not significantly related to positive financial behavior. This may indicate that young adults are focused on handling current circumstances and not planning for future financial events. This is somewhat understandable with nearly a third of young adults age 18-34 reporting experiencing job losses and nearly half having a hard time meeting their current needs. On the other hand, young adults may also believe that they have all the time in the world to get what they want in life without having to change their financial behaviors to achieve difficult long-term resource accumulation.

A positive relationship was found between all three components of financial literacy (subjective knowledge, objective knowledge, and perceived financial capability) and financial behaviors among young adults age 18-34, while controlling for financial stressors. These findings support previous studies that suggest more than just objective financial knowledge is needed when it comes to influencing positive financial behaviors (de Bassa Scheresberg, 2013). This study also supports previous research that has found that people moderately to substantially over-estimate their financial capabilities when compared to their actual knowledge which impacts their financial lives (Gignac, 2022).

This study is valuable to financial counselors because it suggests that there are more challenges in young adults age 18-34 financial lives than just numbers and dollars. Some young adults are feeling the strain of financial demands to the point where some are experiencing financial anxiety. Because financial anxiety is a significant factor in young adult positive financial behaviors, it is good for financial counselors and financial professionals to be aware of its negative potential. If reducing financial stressors and increasing financial literacy do not decrease financial anxiety and increase positive or healthy financial behaviors, young adults may need to be referred to other psychological professionals.

This study also informs financial educators because it reiterates that financial literacy tends to increase positive or healthy financial behaviors. However, the regression results showed that only focus on current circumstances was associated with more positive financial behaviors. This could be due to a lack of knowledge about long-term positive financial behaviors such as investing, reducing debts, building credit, etc. It could also be due to high financial anxiety that causes focus on immediate needs. Financial education that increases literacy about the importance of long-term behaviors and addresses the psychological and emotional aspects of financial stressors may be beneficial.

Policymakers who deal with welfare in the US may also benefit from this study. Social Security may have never been meant to provide one's retirement, but without help in securing their own retirements, the young adults of today are going to be completely dependent on what little they receive from the government when they retire. It will be important for today's policymakers to increase access to good financial education, implement incentives for personal retirement savings and decreasing debt, and manage the economy well in order to reduce inflation so that young adults have more to save for their financial security.

References

de Bassa Scheresberg, C. (2013). Financial literacy and financial behavior among young adults: evidence and implications. *Numeracy 6*(2). http://dx.doi.org/10.5038/1936-4660.6.2.5

Archuleta, K. L., Dale, A., & Spann, S. M. (2013). College students and financial distress: Exploring debt, financial satisfaction, and financial anxiety. *Journal of Financial Counseling and Planning, 24*(2), 50-62. https://search-ebscohost-com.dist.lib.usu.edu/login.aspx?direct=true&db=psyh&AN=2014-06577-004&site=ehost-live

Duggan, W. (2022, December 13). Why is Inflation So High? *Forbes Advisor.* https://www.forbes.com/advisor/investing/why-is-inflation-rising-right-now/

Fisher, P. J., & Yao, R. (2017). Gender differences in financial risk tolerance. Journal of Economic Psychology, 61, 191-202. http://dx.doi.org/10.1016/j.joep.2017.03.006p

Gignac, G. E. (2022). The association between objective and subjective financial literacy: Failure to observe the Dunning-Kruger effect. *Personality and Individual Differences, 184*. https://doi-org.dist.lib.usu.edu/10.1016/j.paid.2021.111224

Horymski, C. (2023, February 2023). Average consumer debt levels increase in 2022. *Experian*. https://www.experian.com/blogs/ask-experian/research/consumer-debt-study/

Huston, S. J. (2010). Measuring financial literacy. *The Journal of Consumer Affairs, 44*(2), 296-316. https://doi.org/10.1111/j.1745-6606.2010.01170.x

Kim, K. T., Anderson, S. G., & Seay, M. C. (2019). Financial knowledge and short-term and long-term financial behaviors of millennials in the United States. *Journal of Family and Economic Issues, 40*(2), 194-208. https://doi-org.dist.lib.usu.edu/10.1007/s10834-018-9595-2

Lusardi, A., & Mitchelli, O. S. (2007). Financial literacy and retirement preparedness: Evidence and implications for financial education, the problems are serious, and remedies are not simple. *Business Economics 42*, 35–44. https://doi.org/10.2145/20070104

Medina, L., Sabo, S., & Vespa, J. (2020, February). Living longer: Historical and projected life expectancy in the United States, 1960 to 2060. *United States Census Bureau*. https://www.census.gov/library/publications/2020/demo/p25-1145.html

National Foundation for Credit Counseling. (2020, March 23). *2020 Consumer Financial Literacy Survey.* The Harris Poll. https://digital.nfcc.org/wp-content/themes/foundation/assets/files/NFCC_Discover_2020_FLS_Datasheet%20With%20Key%20Findings_Clean.pdf

Peter G. Peterson Foundation (2022, October, 24). *Three major challenges to retirement security*. PGPF. https://www.pgpf.org/blog/2022/10/three-major-challenges-to-retirement-security

Social Security Administration. (2022, June). *Retirement Ready: Fact Sheet For Workers Ages 18-48*. SSA. https://www.ssa.gov/myaccount/assets/materials/workers-18-48.pdfP

Xiao, J. J., Cheng, C., & Sun, L. (2015). Age differences in consumer financial capability. International Journal of Consumer Studies, 39(4), 387-395. https://doi-org.dist.lib.usu.edu/10.1111/ijcs.12205

Examining Financial Anxiety Through Cognitive Appraisals and Coping During a Global Pandemic

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Abstract

During the COVID-19 pandemic, many individual's financial anxiety intensified due to the potential of job insecurity (Vieira et al., 2021). This study applied Lazarus and Folkman's (1984) Transactional Model of Stress and Coping (TMSC) to explore the influence of cognitive processes, economic adjustment strategies, and receiving a stimulus check on financial anxiety during COVID-19. Hierarchical regression analysis was conducted. The findings revealed that perceiving having more financial resources was negatively associated with financial anxiety, even after accounting for economic coping strategies. Conversely, decreasing money expenditures demonstrated a positive association with financial anxiety. Interactive effects were observed between receiving a stimulus check, perceived financial resources, and financial anxiety. These results underscore the significance of considering cognitive processes, economic coping strategies, and the role of stimulus checks in addressing financial anxiety. Implications for financial practitioners and researchers working with individuals and families experiencing financial anxiety are discussed.

Keywords: COVID-19, economic coping strategies, financial anxiety, Transactional Model of Stress and Coping

References

Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. Springer.

Vieira, K. M., Potrich, A. C. G., Bressan, A. A., & Klein, L. L. (2021). Loss of financial well-being in the COVID-19 pandemic: Does job stability make a difference?. *Journal of Behavioral and Experimental fFnance*, *31,* 100554. https://doi.org/10.1016/j.jbef.2021.100554

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The New Generation of Clients: Exploring Age Differences in Client Perceptions of Advice

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Keywords: age differences, client perceptions, financial advice

Abstract

In an era of longevity, financial advisory clients of all ages must plan earlier for the complexities and costs associated with longer lives. Leveraging survey data from financial advisory clients, this study explored age differences in clients' expectations, priorities, and perceptions of financial advice. Younger clients expressed a desire for advisors to fill less traditional, more personal roles, and also indicated lower commitment to their current advisor, and a range of reasons they may discontinue the relationship. Results suggest financial professionals may solidify their value proposition by tailoring their offerings to match the type of relationship desired by their clients.

Background

The landscape of financial advice is constantly evolving. With increased longevity, there is a greater need to plan – and plan earlier – for what these extra years will look like, and how they will be financed. Additionally, the financial picture for younger adults is increasingly complex. Student loan debt has grown astronomically in past decades, forcing tradeoffs between paying off education debt and saving for retirement. And as their parents live longer, more children will become caregivers, with associated cost, career, and planning implications.

Unique complexities and planning considerations accompany each phase of life, calling for tailored financial advice. Understanding what different age groups want and need is a first step to ensuring clients receive the appropriate financial education and counseling to support successful longer lives. Further, understanding the perceived value that an advisor provides, as well as their clients' satisfaction with the quality of the relationship, is key to long-term client retention, and possible referral to future generations of clients.

Given that different generations may have different expectations and priorities regarding financial advice, there is a need to understand how clients of different age groups perceive financial advice relationships and the roles that advisors should ideally fill, what drives their trust and satisfaction in these relationships, and under what circumstances clients might leave their current financial advisor.

Methodology

To answer these questions, the MIT AgeLab conducted a national survey of 2,038 participants. All participants reported regularly working with a financial professional. The survey included questions about clients' levels of trust and satisfaction in their financial professionals, and which aspects of their advisory relationships contributed to or diminished those feelings. Participants ranged in age from 30 to 75 and reported a yearly household income of $50,000 or more and total savings of $50,000 or more, including savings accounts, checking accounts, and investment or retirement accounts.

Survey respondents were distributed relatively evenly across ages (33% 30-45, 34% 46-60, 34% 61-75) and gender (50% female, 50% male). Additionally, a majority of the sample reported working full-time (58%), while the next largest employment group reported being retired (26%). Other, smaller employment categories included working part-time, being self-employed, being unemployed, and being a student. See table 1 for demographic information.

To evaluate the research questions, descriptive statistics were run for each variable. Additionally, crosstabs with chi-square tests and one-way ANOVAs were used to evaluate differences by age groups.

Results

General trust in financial professionals

Clients surveyed reported a moderately high level of general trust in financial professionals. When asked, *"In general, how trustworthy would you say most financial professionals are,"* a majority of respondents answered *"extremely trustworthy"* (19%) or *"very trustworthy"* (42%). Thirty-two percent answered *"moderately trustworthy."* Relatively few answered *"slightly trustworthy"* (6%) or *"not at all trustworthy"* (1%).

Breaking down respondents by age, however, revealed differences in their levels of trust toward financial professionals (Figure 1). The highest levels of trust belonged to clients ages 30-45, a majority of whom described financial professionals as either *"extremely trustworthy"* (39%) or *"very trustworthy"* (37%). Older respondents, meanwhile, reported markedly lower levels of trust. Nearly half of 46-60-year-olds (47%) and 61-75-year-olds (45%) perceived financial professionals to be only *"moderately," "slightly,"* or *"not at all"* trustworthy. The youngest age group reported significantly higher trust overall than both the 46-60 and the 61-75 age groups [$F(2, 2035) = 86.068$, $p < .001$].

Trust and satisfaction with current financial professional

Overall, clients reported high levels of satisfaction with their current financial professional. In fact, 79% reported being *"extremely satisfied"* or *"very satisfied,"* compared with the 16% of respondents who reported moderate satisfaction, and the 5% who reported being *"slightly"* or *"not at all"* satisfied.

The youngest set of clients (ages 30-45) was the age group most likely to report being *"extremely"* or *"very"* satisfied with their current professional (82%), as compared with 76% of those aged 46-60 and 79% of those aged 61-75 (Figure 2). This age group reported significantly higher satisfaction overall than both the 46-60 and the 61-75 age groups [$F(2, 2035) = 10.63$, $p < .001$].

The survey also explored specific factors driving respondents' satisfaction with their current financial professional, beyond portfolio performance. Across all age groups, the top three drivers of satisfaction were *"financial professional's expertise"* (49%), *"financial professional's understanding of my financial and life goals"* (49%), and *"financial professional's ability to explain things"* (34%). Although the primary drivers of satisfaction were fairly consistent across age groups, clients of different ages prioritized these drivers differently (Table 2). A financial professional's company's reputation, for instance, was a top-five factor for only the oldest group of clients (ages 61-75). Younger clients (ages 30-45) prioritized their professionals' level of experience over their insight into client goals, while the opposite was the case for middle-aged (46-60) and older (61-75) clients.

The survey also explored respondents' overall levels of trust, confidence, and commitment (TCC) to their current financial professional through a composite of multiple survey items. Ten individual survey items (Table 3) relating to TCC in one's current financial professional were averaged to create an overall TCC scale, with 1 representing the lowest levels of TCC and 5 representing the highest. Younger clients and middle-aged clients scored equally on this metric (4.1) and older clients scored slightly higher (4.3). In general, however, across ages, trust, confidence, and commitment levels were high, with 71% of all respondents reporting a high or very high level of TCC (a mean score of 4 or 5) regarding their current financial professional. Of the questions contributing to the three age groups' composite TCC scores, perhaps the starkest difference appeared in response to the statement *"I could be persuaded to transfer to a different professional."* 39% of younger clients agreed, as compared to only 13% of middle-aged and 4% of older clients. Younger clients may score highly in trust and confidence, but less so for commitment.

Breaks in the client-advisor relationship

While many respondents expressed satisfaction with their current financial professional, a subset (19%) indicated that they could see a time when they might need to part ways with their current professional. The survey asked these participants "*under what circumstances might you not want to stay with your current financial professional in the future?"* The two most common responses (Figure 3) concerned poor performance (49%) or poor service (48%). Additionally, over a quarter of clients (28%) indicated that they might switch financial professionals if they had to relocate geographically. Twenty-five percent of clients also reported a willingness to leave their current professional if they felt no personal connection to them. Fewer participants indicated that retirement (15%), a job or career change (11%), or a change in family composition (10%) would cause them to seek a new financial professional.

Client age was an important factor in determining why clients might part ways with their current professionals (Figure 4). Older respondents were most likely to offer service-related factors as potential reasons for firing their professional, while the younger group was more likely to invoke reasons related to major life events. (Clients in the middle age group did not differ significantly from either the youngest or the oldest age group in their responses to these questions, which always fell between the two.) The youngest age group was significantly more likely than the oldest group to cite a job or career change as a reason for leaving their current professional (20%, as compared to 1%). Younger clients (17%) were also more likely than the oldest age group (3%) to mention a change in family composition as a reason for switching, and younger clients (23%) were more likely than older clients (10%) to say that they would leave their current financial professional if he or she was unwilling to discuss an important life issue.

Older clients, meanwhile, were more likely (60%) to mention poor portfolio performance as a reason for leaving their financial professional, as compared with 31% of younger clients. In keeping with other results from this survey, then, younger clients may be seeking services from their financial professional that extend beyond standard financial advice, while older client segments may place a higher value on more traditional factors, such as financial performance and service.

The role of an ideal financial professional
To further explore how clients of different ages view the client-advisor relationship, the survey asked clients what roles they were looking for their ideal financial professional to fill. Figure 5 displays their responses, organized by age group. All age groups chose *"future financial risk management," "helping me see a plan for my future,"* and *"financial educator"* for their top three roles. This result indicates that, above other concerns, clients continue to look to their professionals primarily as trusted sources of financial advice.

Looking beyond the top three roles, however, differences begin to emerge among client age groups. Respondents in the youngest age group were more likely to report an interest in having their financial professional serve a variety of roles, whereas the middle and upper age groups were more likely to prefer roles centered on future financial goals and financial education. Specifically, respondents ages 30-45 were more likely to want their ideal financial professional to "*manage complex aspects of my life"* (35%), act as a "*life coach"* (30%) and serve as a "*friend"* (30%). Interest in these roles dwindled with increasing client age, while the percent of respondents interested in future financial management and education roles grew. For example, 63% of respondents ages 61-75 reported wanting their professional to "*help me see my plan for the future*," compared to 59% of 46-60-year-olds and 40% of 30-45-year-olds. Similarly, 63% of the oldest age group reported wanting their professional to help with *future financial risk management*, compared with 60% of the middle age group and 41% of the youngest group.

Discussion
Across the board, financial advisory clients reported that strong financial advisory fundamentals, such as good service and successful portfolio management, were preconditions for a trusting relationship with their financial professional. Despite high satisfaction, some clients—younger clients in particular—indicated lower commitment to their current advisor, and a range of reasons they may discontinue the relationship. Age differences also emerged in the roles clients hope the ideal advisor would fill, with younger clients in particular naming less traditional – and more personal – roles. These results raise the possibility that financial professionals may solidify their value proposition by tailoring their offerings to match the type of relationship desired by their clients. Financial professionals should consider the following three takeaways in their work with clients.

1. Financial professionals are considered trusted sources of advice across many life domains. The majority of survey respondents reported high levels of trust in both financial professionals in general, and in their personal financial professionals. Similarly, survey participants reported high levels of confidence in, and commitment to, their financial professionals. While portfolio performance and service were important factors in clients' ratings of their financial professionals, so too were their understanding of clients' life goals and other complexities. Financial professionals may continue to be seen primarily as sources of financial advice, but, from a client's perspective, the most valuable financial professionals may expand upon this core service to provide support and guidance in other life domains. Further, communication played an integral role in determining client satisfaction with their financial professional, appearing in the top five drivers of satisfaction across all age groups. In addition to supplying such financial table stakes as portfolio performance and financial expertise, a financial professional's ability to effectively communicate and collaborate with clients is key to maintaining a strong working relationship.

2. Financial professionals can and should occupy new roles.
Many clients across all ages are looking for their financial professionals to step into a broader set of roles. Few survey respondents indicated that their financial professionals should only manage their finances, while a larger group reported looking to their professionals to help them visualize and plan for the future, serve as their financial educator, and even act as a resource connector in the face of life's complexities. Financial professionals may add to their value proposition by serving as trusted sources of advice for their clients across many life domains, and by connecting them with resources they might not know to seek out on their own.

3. The client of the future: Rethinking the client-advisor relationship.
While a sizable subset of survey respondents of all ages valued financial professionals who stepped beyond purely financial domains, the youngest generation of clients led the way in wanting their professionals to serve a wider variety of roles in their financial and personal lives. The youngest survey respondents reported being the most trusting and most satisfied with their financial professionals – and, simultaneously, the most likely to leave a financial professional who did not fit their needs. This age group was less likely than older generations to anticipate leaving their financial professional for poor portfolio performance, but more likely to fire their financial professional if he or she was unwilling talk about other important issues in their lives. This younger group was also more likely than older age groups to want their financial professional to act a life coach, a confidant, and even a friend. While the 30-45 age group may comprise the minority of the advisory profession's current set of clients, these individuals are the clients of the future. As this cohort continues to accumulate wealth and prepare for a new age of longevity, they will seek advisors willing and able to adapt to their unique needs and expectations. While expertise and performance remain important to clients of all ages, the next generation of clients is challenging financial professionals to reimagine the client-advisor relationship.

Acknowledgements:
The MIT AgeLab would like to thank Corebridge Financial for supporting this research.

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Table 1. Demographic information of participants (N = 2,038)

Age group	30-45 years: 33% 46-60 years: 34% 61-75 years: 34%
Gender	Male: 50% Female: 50%
Race	White: 68% Latinx: 10% African American: 10% Asian: 10%
Investable assets	Less than $75,000: 37% $75,000-$249,999: 35% $250,000 or more: 29%

Figure 1: Trust in Financial Professionals by Client Age

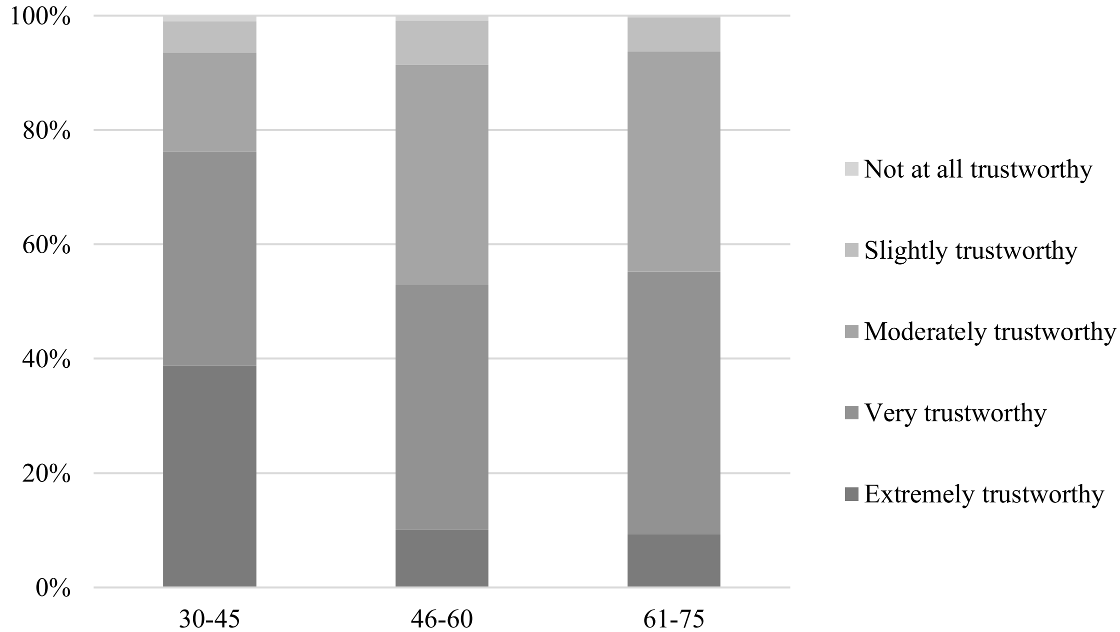


Figure 2: Satisfaction with Financial Professionals by Client Age

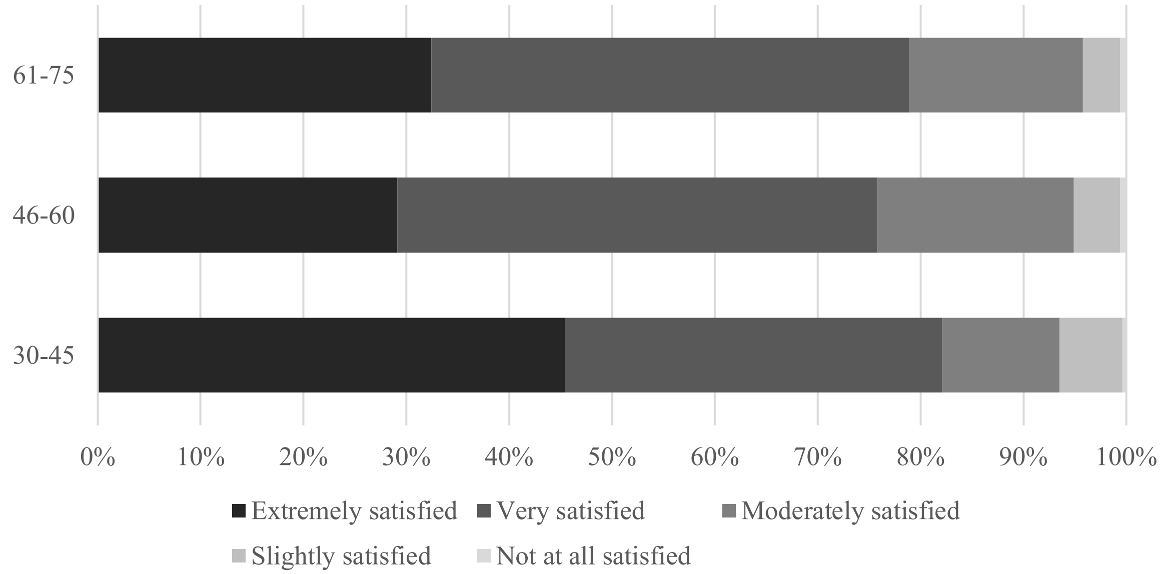


Table 2: Percentage of Respondents by Age Who Rated the Following as Their Top Driver of Satisfaction with Current Financial Professional

	30-45-year-olds	46-60-year-olds	61-75-year-olds
#1	Financial professional's expertise (34%)	Financial professional's understanding of my financial and life goals (56%)	Financial professional's understanding of my financial and life goals (60%)
#2	Financial professional's understanding of my financial and life goals (30%)	Financial professional's expertise (55%)	Financial professional's expertise (58%)
#3	Financial professional's ability to explain things (28%)	Financial professional's ability to explain things (38%)	Financial professional's reputation (51%)
#4	Financial professional's reputation (23%)	Financial professional's years of experience (21%)	Financial professional's ability to explain things (37%)
#5	Financial professional's years of experience (23%)	Financial professional develops my portfolio in line with my ethics/morals (21%)	Reputation of company financial professional works for (25%)

Table 3: Trust, Confidence, and Commitment to One's Current Financial Professional

% Who Strongly Agree with Each Statement	Ages 30-45	Ages 46-60	Ages 61-75
I have confidence in my financial professional's integrity	52%	56%	69%
I have confidence in my financial professional's skills and expertise	53%	52%	63%
I can rely on my financial professional to follow through on his/her commitments	48%	54%	66%
I trust my financial professional	53%	53%	65%
I view my financial professional as a sincere person	49%	53%	65%
I would refer my financial professional to my best friend	50%	44%	48%
I intend to stay with my financial professional indefinitely	47%	44%	54%
I could be persuaded to transfer to a different professional	39%	13%	4%
My financial professional is someone my family can turn to should I die or become incapacitated	47%	45%	54%
My financial professional considers all aspects of my life when managing my finances	46%	40%	44%
Trust, confidence and commitment composite score (Range: 1-5)	**4.1**	**4.1**	**4.3**

Figure 3: Reasons Clients Would Leave Financial Professionals

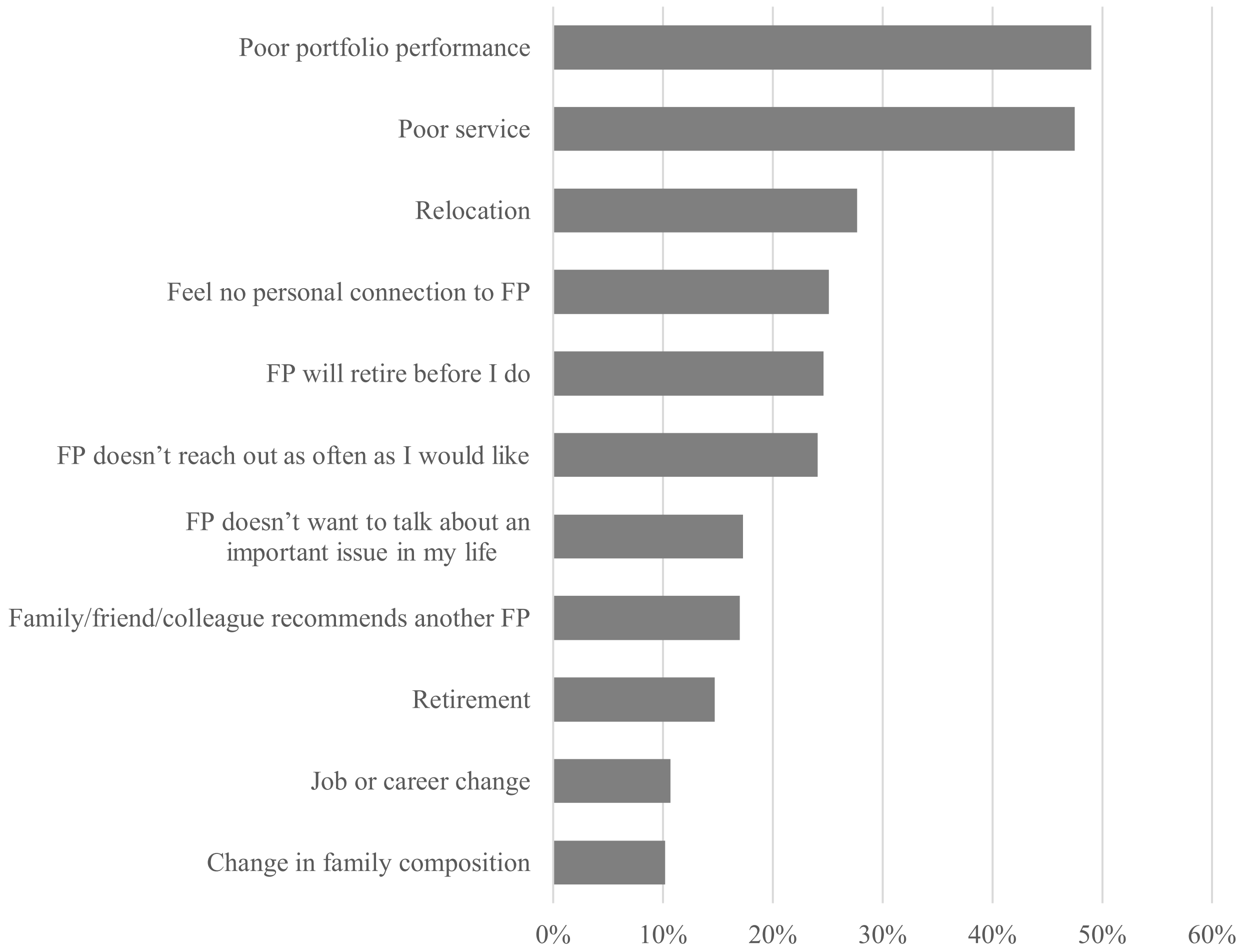


Figure 4: Reasons for Leaving Financial Professionals by Client Age

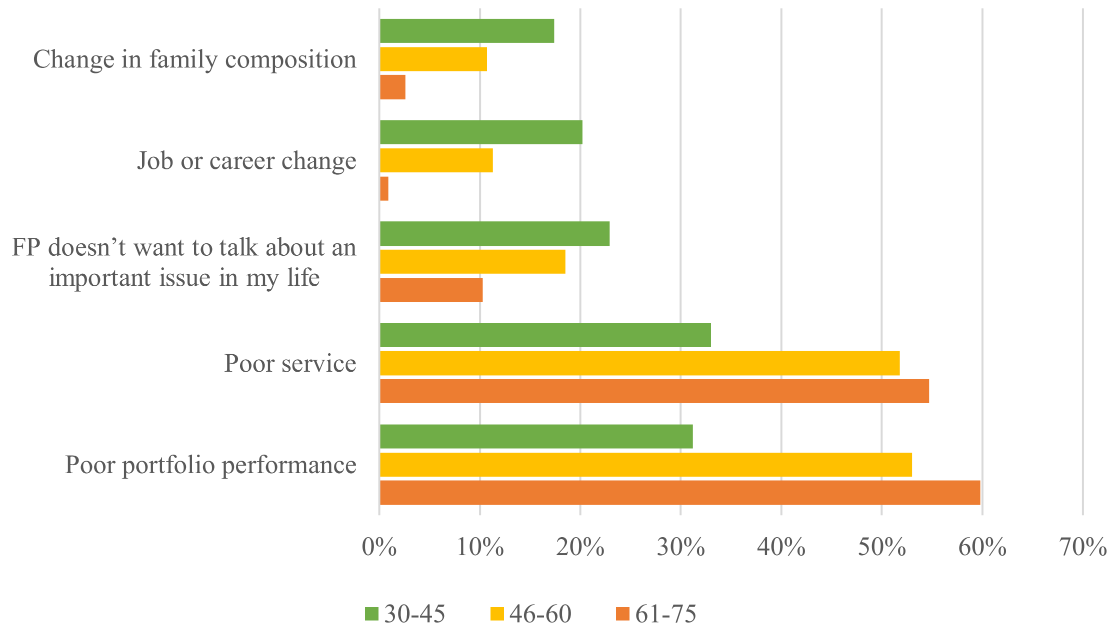
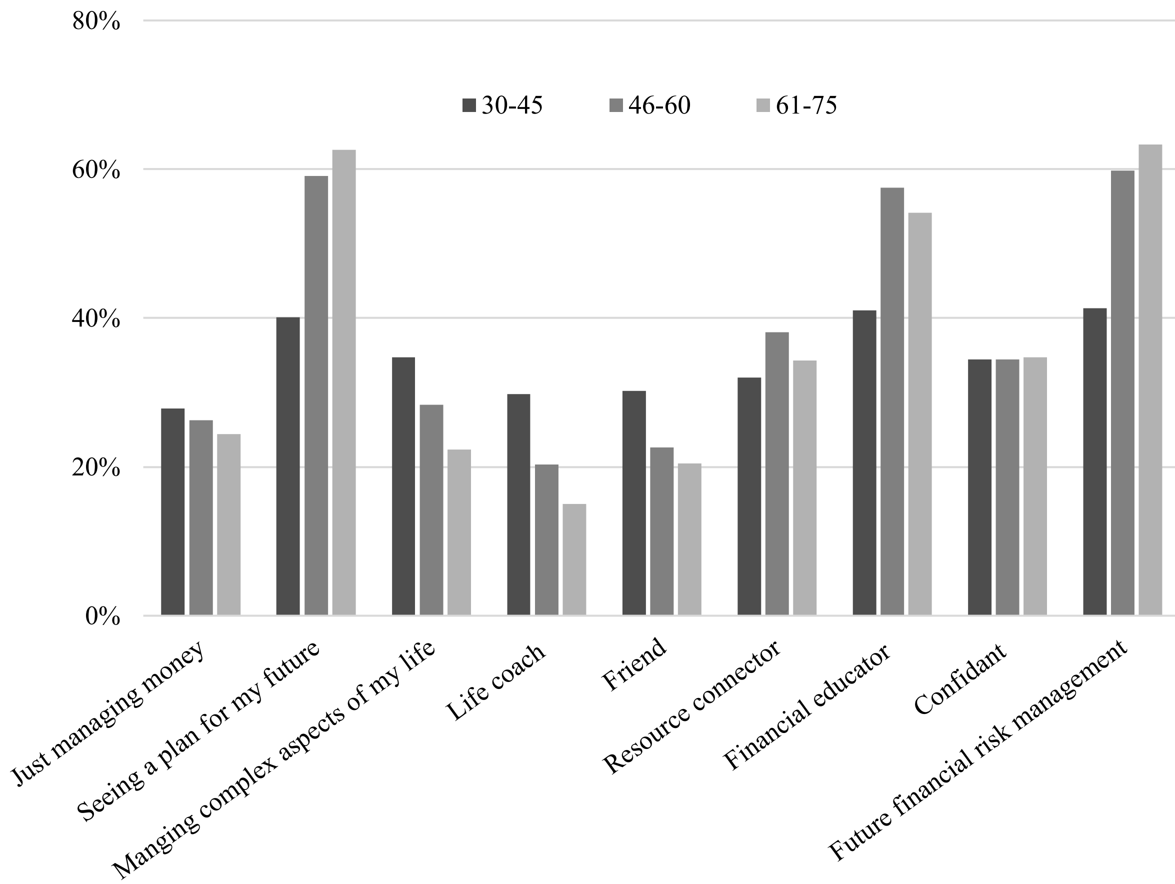


Figure 5: Ideal Roles of Financial Professionals by Age



A Structural Equation Modeling Approach to Understanding Emotional and Physical Consequences of Familiar Identity Theft Victimization

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Abstract

Identity theft is a perennial problem in the U.S., with 15.3 million adult victims identified in 2021 and 15.4 million victims identified in 2022 (Buzzard, 2023). While there is substantial scholarship on identity theft, less attention as been given to familiar identity theft. "Familiar identity theft occurs when an individual has his/her identity stolen by a close associate" (Betz-Hamilton, 2020). Identiuty theft can result in emotional and physical consequences (Golladay & Holtfreter, 2017). The primary purpose of this study was to identify factors that influence the emotional and physical consequences experienced by familiar identity theft victims. The secondary purpose of this study was to confirm the unidimensionality of the latent variables, emotional consequences and physical consequences, using data from the 2016 National Crime Victimization Survey-Identity Theft Supplement. A four-factor structural equation model revealed identity theft victims who knew the offender were less likely to lose money and more likely to experience physical consequences than those who had no relationship with the offender. Familiar identity theft victims who experienced emotional consequences were very likely to also experience physical consequences.

References

Betz-Hamilton, A. (2020). Understanding the experiences of familiar identity theft victims: A pilot study. *Journal of Financial Therapy, 11* (1), 6. http://doi.org/10.4148/1944-9771.1237

Buzzard, J. (2023, March 28). *2023 identity fraud survey: The butterfly effect.* https://javelinstrategy.com/research/2023-identity-fraud-study-butterfly-effect

Golladay, K., & Holtfreter, K. (2017). The consequences of identity theft victimization: An examination of emotional and physical health outcomes. *Victims and Offenders, 12*(5), 741–760. https://doi.org/10.1080/15564886.2016.1177766

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Consumer Financial Literacy and Financial Anxiety: New Experimental Evidence

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Keywords: financial literacy, financial anxiety, financial education

Abstract

Financial anxiety and financial knowledge influence several indicators of money management behavior (Grable et al., 2020). This understanding of financial anxiety and knowledge becomes even more important after the COVID-19 pandemic. Previous studies have also found that high financial literacy is associated with better financial decisions in day-to-day financial matters, mortgage acquisition and long-term investment planning, as well as retirement planning (Van Rooij, Lusardi, & Alessie, 2011a; Chu et al., 2017; Bialowolski, 2022). The purpose of this study is to examine the role of financial literacy in reducing anxiety about personal finances by using 2021 National Financial Capability Study (NFCS).

References

Bialowolski, P., Cwynar, A., Xiao, J. J., & Weziak-Bialowolska, D. (2022). Consumer financial literacy and the efficiency of mortgage-related decisions: New evidence from the Panel Study of Income dynamics. International Journal of Consumer Studies, 46(1), 88-101.

Chu, Z., Wang, Z., Xiao, J. J., & Zhang, W. (2017). Financial literacy, portfolio choice and financial well-being. Social Indicators Research, 132, 799-820.

Grable, J. E., Archuleta, K. L., Ford, M. R., Kruger, M., Gale, J., & Goetz, J. (2020). The moderating effect of generalized anxiety and financial knowledge on financial management behavior. Contemporary Family Therapy, 42, 15-24.

Van Rooij, M., Lusardi, A., & Alessie, R. (2011). Financial literacy and stock market participation. Journal of Financial economics, 101(2), 449-472.

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Professional Partnerships and Client Referrals: Exploring Financial Professionals' and Clients' Perspectives

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Keywords: financial planning, client-advisor relationship, professional network, referrals

Abstract

As the financial planning industry evolves to address a broadening range of topics, financial professionals can supplement their expertise by connecting clients to professionals in other industries. Leveraging findings from two studies—one of clients and the other of financial professionals who work with family caregivers, a population that faces unique forms of financial strain and complexity—this session will explore how today's financial professionals are making referrals, where they are facing challenges, and where there may be gaps between what clients want and what their financial professionals are offering.

Introduction

While client-advisor conversations have historically focused on strictly financial topics, clients and advisors alike have shown increased willingness in recent years to discuss new topics such as housing, caregiving, and health of the client and their family members (Balmuth et al., 2021). This may be especially so in cases such as when clients are family caregivers, a role associated with complex financial situations and financial strain (Balmuth et al., 2022; Reinhard & Feinberg, 2020; Timmerman, 2020). Financial professionals may find themselves involved in aspects of clients' lives that are a step outside their direct professional expertise. To assist clients with topics outside of the domain of finance, financial professionals may create connections with and offer referrals to outside professionals such as healthcare experts, social workers, and lawyers.

The current research explores questions addressing the client perspective. For example, are clients open to receiving referrals from their financial professionals? Are some clients more interested in these referrals than others? We also examine questions addressing perspectives from the financial profession: Are financial professionals currently offering referrals to other professionals, and if so, to whom and how? How are financial professionals working to expand their professional networks to assist clients in a more holistic and comprehensive manner? What challenges are financial professionals facing?

Methodology

The research leverages quantitative data from clients of financial professionals, as well as mixed-methods data from financial professionals themselves, to explore the perspectives of both parties about client referrals and professional networks.

Client data

To understand how clients of different ages and backgrounds engage with their financial professionals, the MIT AgeLab surveyed 2,038 participants who reported regularly working with a financial professional and were between the ages of 30 and 75. Participants' demographic information is displayed in Table 1. The questionnaire included questions addressing participants' interest in being connected with outside professionals, as well as the formats in which they would be interested in engaging with outside professionals. The data was analyzed using SPSS; frequencies were run for the two dependent variables mentioned above, and crosstabs were used to evaluate differences across independent variables including age groups.

Financial professional data

To explore financial professionals' experiences and attitudes toward making referrals, the results from financial advisory clients are contrasted with quantitative and qualitative data from PLAN, an international research panel managed by the MIT AgeLab consisting of financial professionals in direct advisory roles. Quantitative data is derived from a questionnaire completed by 107 panelists regarding their experiences with clients who are caregivers–one type of client that may benefit from support from a variety of professionals (e.g., geriatric care managers, aging in place experts, and senior housing professionals). Data was analyzed using SPSS. Supplemental qualitative data is derived from three focus groups and one interview with a total of 12 financial professionals.

During these sessions, participants discussed their experiences and attitudes around connecting clients with outside professionals.

Results

Types of professionals

In the survey for financial professionals, a majority (81%) reported having connected caregiving clients to professionals in other fields. Participants were asked to indicate which professionals, organizations, or other outside resources they have connected with caregiving clients. Results are shown in Table 2. While over half of participants reported connecting resources such as lawyers or attorneys (93.8%), tax specialists (58.8%), and home health professionals (56.8%), many other professionals were rarely utilized. For example, few participants reported providing referrals to experts capable of providing personal and emotional support and informational resources, such as social workers (19.8%), support groups (19.8%), and family therapists or counselors (18.5%).

To explore the types of referrals that may be most desired by clients themselves, participants in the survey for clients of financial professionals were presented with a list of professionals for whom they might want to receive a referral from their financial advisors and asked to indicate for which they might want to receive a referral from their financial advisors. The list of professionals encompassed a broad range of financial and non-financial domains including financial and legal (e.g., estate planner, accountants, attorneys, financial specialists); housing (e.g., real estate agent, home technology, home improvement, age-ready designer/architect, downsizing consultant); mental and physical health (e.g., doctors and medical specialists, home health care agency, therapists); caregiving (e.g., home health care, geriatric or life care manager); and miscellaneous (e.g., financial therapists, career coach, and childcare specialists). Results are displayed overall and by age group in Figure 1. Notably, 79% percent of clients across all age groups indicated interest in being connected with at least one of the listed professionals. The professionals with whom the most participants expressed interest involve the financial and legal domains: estate planners or tax attorneys, accountants, and elder law attorneys.

Clients' interest levels also varied across age groups, with younger clients appearing more interested in receiving referrals generally and for a broader range of professionals. Nearly all (94.8%) of the youngest age group (aged 30-45 years) indicated interest in being connected with at least one of the professionals, compared to 77.2% of the middle age group (aged 46-60 years) and 65.5% of the oldest age group (aged 61-75 years). Over one-fifth of the youngest age group expressed interest in referrals to the following professions: career-work transition coach (21.40%), real estate agent (24.10%), home technology advisor (23.10%), financial therapist (27.40%), home improvement contractor/specialist (22.20%), doctor/medical specialist (24.60%), accountant (30.40%), and estate planner or tax attorney (26.00%).

Engagement preferences

Clients were asked to select the formats in which they would be interested in engaging with outside professionals. The modes of engagement ranged from more direct connections such as one-on-one consultations to hands-off formats such as lists of vetted referrals and group seminars. Results are displayed in Figure 2. More participants demonstrated interest in the more direct connections, with nearly half (46.2%) indicating interest in one-on-one consultations in their financial professional's office with their financial professional present, and slightly fewer (39.2%) interested in a comparable meeting without their financial professional present. In contrast, approximately one-third (34.3%) of participants were interested in their financial professionals providing a list of vetted referrals, and only 22% of clients were interested in group seminars hosted or organized by their financial professional.

Why referrals?

During focus groups and interviews with financial professionals, participants shed more light on how making referrals has become a part of their work. A situation that often compels financial professionals to consider referrals is the emergence of challenging family dynamics during advisory conversations. One participant shared a situation in which he encouraged a client's family to start a discussion about the future of their family business and, in the process, uncovered a long history of family members avoiding the topic. The advisor described the situation as "tangled," remarking that he was unsure whether he had the skillset to deal with it. He believed that, for this family's situation, seeing a professional family therapist could be a more suitable approach.

Another participant cited the aging workforce as an additional reason for financial professional to step in and make recommendations, noting that many clients' existing professional resources are "aging out of the workforce" and needing to be replaced. Consequently, the participant's firm is working to help clients "transition all of [their] sources of help," such as CPAs, attorneys, and other professionals, and "trying to find people that…might last for ten to twenty years."

Challenges, strategies, and success stories
Notably, financial professionals surveyed reported experiencing challenges in locating outside referrals to provide support for caregiving clients. Over half (54%) of survey participants said it was "somewhat" or "very" difficult to locate other professionals, organizations, or outside resources for caregivers, and only 28% said that it was "somewhat" or "very" easy. One possible explanation for this difficulty may relate to the relationships that respondents' organizations have with other professionals; under a third (31.3%) of financial professionals said their organization has formal or informal relationships with professionals whom clients can consult directly for advice or support related to caregiving.

While locating referrals can be challenging, some focus group participants shed light on the strategies they are finding successful in building out their professional networks—as well as the resulting benefits for the client relationship. One financial professional spoke about her decision to interview various professionals and create a comprehensive resource for her clients to refer to when they need someone. "I've thought about everything that I think any client would need, and I want to be the quarterback for anything our clients are going through," she said. She interviewed professionals that others had mentioned, such as CPAs and attorneys, but also other, less typical ones:

> I have a health care specialist. I have a lady that will go into the house and assess the situation and say, 'here's what I think you need,' like, 'you need in-home care,' 'you need to move.' I have divorce attorneys. I have psychologists for your kid who's struggling through COVID. I have a real estate agent.

By vetting these professionals, she has built a robust network of referrals for clients. The resource has successful for her firm: "Now [clients] call us and tell us what's going on, because we keep giving them people that they feel really good about to help them in whatever situation they're in."

Discussion
For most advisors, making referrals to other professionals is a standard part of the job, particularly when working with clients with complex needs such as family caregivers. Over 90 percent of advisors report making referrals to lawyers and elder law attorneys to caregiving clients, and significant numbers have made connections with tax specialists and home care professionals. However, most financial professionals do not report making referrals related to other key areas of potential support for clients—especially "helping" professions like social workers, respite care providers, geriatric care managers. Our qualitative findings suggest that advisors sometimes encounter complex client issues that they are not equipped to address. In such cases, having the ability to make a referral to an outside professional allows the advisor to address a wider range of challenges.

Over half of financial professionals in our survey reported having difficulty with locating professionals, organizations, and outside resources. Advisors may need assistance in building these networks. Firms may be able to assist individual advisors by collating a list of vetted professionals and sharing it across their employee base, allowing them to better serve as conduits for knowledge and support beyond just financial advising. Only a minority of advisors reported that their firm has connections with a network of outside professionals.

Clients are open to receiving referrals from their advisor. We found that many clients are interested in their financial professionals connecting them with outside professionals in a variety of formats. Younger clients are significantly more likely to report interest in receiving referrals to a wide range of professionals, including aging-in-place specialists, financial therapists, and career coaches, among others. These clients are likely to retain these preferences as they age and build their wealth. Advisors hoping to recruit new clients may aim to distinguish themselves by their ability to make referrals to a diverse range of experts.

Whether striving to fill gaps in their personal expertise, or to establish themselves as their client's go-to support when life happens, a professional network is a way for financial professionals to augment their capacities. Financial professionals on the "cutting edge" who are leveraging these diverse professional networks are finding success in terms of client trust, engagement, and retention. As advisors seek to demonstrate areas of value beyond "just managing money," finding ways to integrate into a robust network of professionals, and so becoming more holistic in one's practice, may be a differentiating factor—especially for younger prospective clients who are seeking a wider range of support.

Future work

Further research might explore the level of importance that advisors place in their profession on playing the role of the "resource-connector," whether they see this capacity as an aspect of the role of the "advisor of the future," and which professionals that advisors believe their profession ought to be connecting clients to. Additionally, the survey of advisors focused only on work with one client subgroup—family caregivers—but other subsets of the client base who may benefit from referrals to outside professionals (e.g., older clients with health challenges), or even the broader population of clients, are also worth examining.

Acknowledgments

The MIT AgeLab thanks Corebridge Financial and sponsors of the Preparing for Longevity Advisory Network (PLAN) research consortium for their support of this research.

References

Balmuth, A., Cerino, L., & Felts, A. "Evolving Client-Adviser Conversations and The Future of Advice." *Journal of Financial Planning,* 34, no. 12 (2021): 44-49.

Balmuth, A., Miller, J., Cerino, L., Felts, A., D'Ambrosio, L., & Coughlin, J. (2022). CONVERSATIONS ON THE COSTS OF CAREGIVING: COMPARING CAREGIVERS'AND FINANCIAL ADVISORS'PERCEPTIONS. *Innovation in Aging*, 6(Suppl 1), 558.

Timmerman, S. "A New Look at Family Caregiving: Insights for Financial Services Professionals." The Journal of Financial Services Professionals, Vol 74, No. 1 (2020): 20-24.

Reinhard, S., & Feinberg, L. (2020). Caregiver Health and Well-Being, and Financial Strain. *Innovation in Aging*, *4*(Suppl 1), 681–682. https://doi.org/10.1093/geroni/igaa057.2374

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Table 1: Demographic information of participants (N = 2,038)

Age group	30-45 years: 33% 46-60 years: 34% 61-75 years: 34%
Gender	Male: 50% Female: 50%
Race	White: 68% Latinx: 10% African-American: 10% Asian: 10%
Investable assets	Less than $75,000: 37% $75,000-$249,999: 35% $250,000 or more: 29%

Table 2: Share of financial professionals who made referrals to outside professionals for caregiving clients.

Referrals made	**Percent**
Lawyer or eldercare attorney	93.8%
Tax specialist	58.0%
Home care agency or home health aide	56.8%
National org or advocacy group for caregiving/aging	32.1%
Geriatric care manager	30.9%
Area agency on aging	28.4%
Doctor or healthcare provider	27.2%
National org or advocacy group for specific disease/condition	27.2%
Hospice care provider	23.5%
Social worker	19.8%
Caregiving support group	19.8%
Family therapist or counselor	18.5%
Respite care provider	17.3%

Figure 1: Clients who expressed interest in being connected with various professionals within financial professional's network, shown overall and by client age.

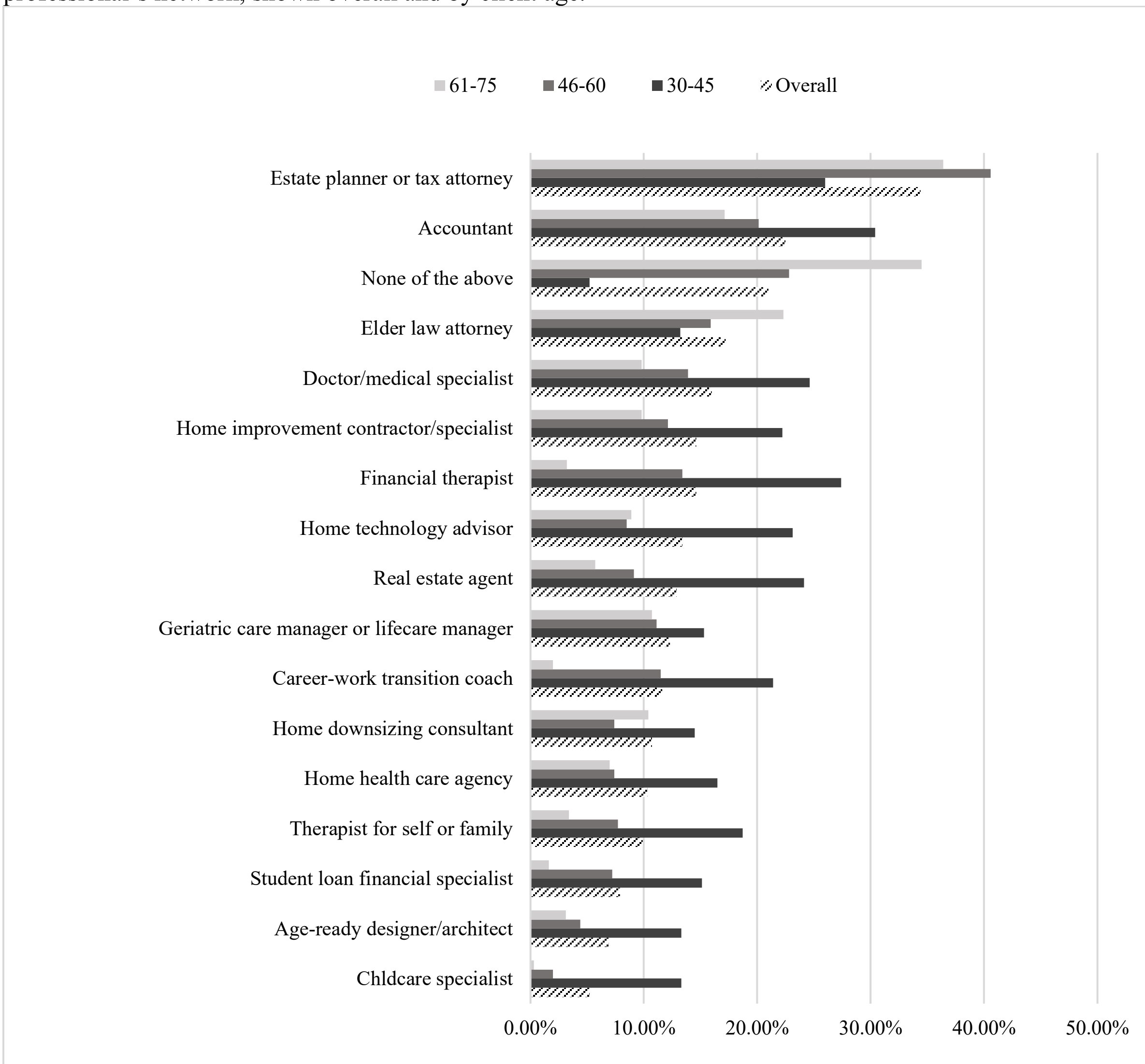
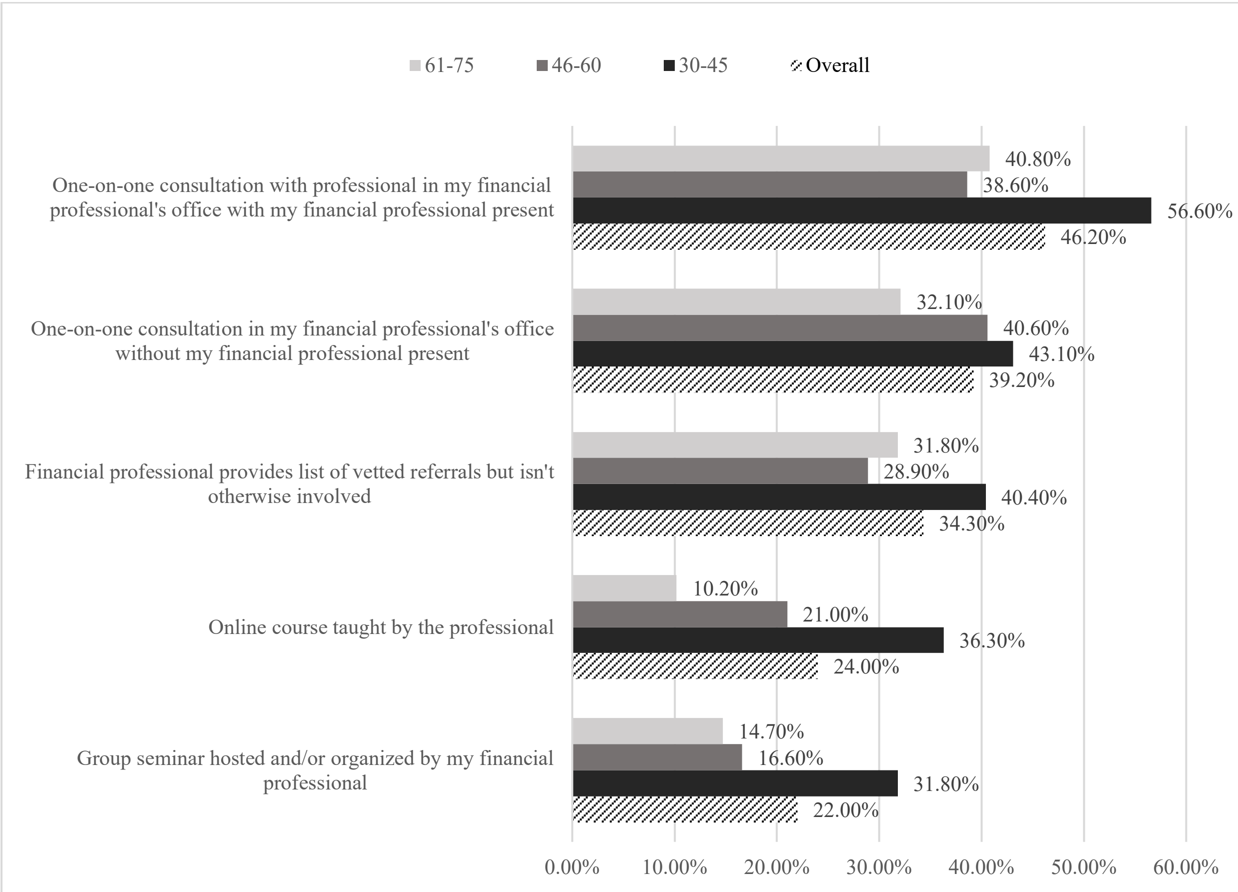


Figure 2: Clients who expressed interest in various modes of interaction with outside professionals in financial professional's network, shown overall and by client age.



Negative Home Equity and Financial Stress among Mortgagees in the U.S.

Leslie E. Green, Texas State University & Narang Park, University of Georgia

Abstract

Using the 2018 National Financial Capability Study, this research examined the association between the occurrence of negative home equity (NHE) and financial stress. This study adapted Joo and Grable's (2004) conceptual framework for the determinants of financial satisfaction to examine this association. Structural equation modeling revealed a direct significant and positive association between NHE and financial stress. The greatest magnitude of effect on financial stress in the model was through a direct and significant association with insolvency. Implications for mortgagees with NHE and financial counselors and educators is discussed.

Keywords: financial stress, negative home equity, structural equation modeling

Background

Housing problems such as mortgage default and the loss of a home through foreclosure have been associated with physical and mental health issues (e.g., Brown et al., 2005; Chen et al., 2021; Yilmazer et al., 2015) and increased financial or debt stress (e.g., Prohaska & Lichtenstein, 2013; Xiao & Kim, 2022). Financial stress occurs when an individual worries about their personal financial situation; this worry may stem from an economic challenge or change (Friedline et al., 2021; Grable, 2016). Homeowners can also experience negative home equity. Negative home equity (NHE) occurs when a mortgagee owes more on the home than it is worth (CoreLogic, 2023). NHE may occur as the result of acquiring additional mortgage debt and/or a drop in the market value of the home and can therefore be remedied through repayment of the mortgage and/or an increase in the market value of the home (CoreLogic, 2021, 2023). Remedying NHE in this way may take considerable time. Mortgagees who may need to relocate (e.g., for a job) or who find themselves also experiencing other financial issues may see the need to sell the home at a loss or strategically default on their mortgage (Foote et al., 2008; Gerardi, et al., 2018; Raymond, 2018). Approximately 1.2 million homeowners in the US had NHE in 2022 and some 24 states reported having high or very high rates of NHE (CoreLogic, 2023).

Purpose

The body of research on mortgage default/foreclosure and financial stress is reasonably well documented (e.g., Prohaska & Lichtenstein, 2013; Xiao & Kim, 2022). However, limited research exists on the association between NHE and financial stress; what does exist suggests that NHE and financial stress are related (Chen et al., 2021; Wood & Parkinson, 2009). This study seeks to further explore the association between NHE and financial stress. The results of this research may help financial counselors and educators (FCE) who work with mortgagees who have NHE to reduce their financial stress regardless of the outcome of the NHE (e.g., remaining in the home, selling at a loss, strategic mortgage default). The results may also be useful for FCE who work with mortgagees who have very low home equity and are at risk for NHE should home values drop.

Conceptual Framework, Literature, and Hypothesis

Conceptual Framework

The conceptual framework for this study was adapted from the work of Joo and Grable (2004). Their framework, while focused on financial satisfaction, presents factors that directly effect financial stress (solvency, financial behavior, risk tolerance, and housing) and factors that indirectly effect financial stress (income, financial knowledge, and experiencing financial stressor events; Joo & Grable, 2004). They encourage consumer economists to use this framework to help their clients improve their financial behaviors and reduce their financial stress levels (Joo & Grable, 2004). The complete and adapted framework will be illustrated in the presentation.

Literature Review and Hypotheses

Current literature, together with the conceptual framework, was used to create the hypotheses for this study. Data from Consumer Financial Monthly has shown that NHE is significantly and positively related to financial stress among U.S. households even when controlling for income, debt, and home values (Chen et al., 2021). Data from the Household Income and Labor Dynamics in Australia Survey has shown that the occurrence of NHE is associated with financial stressors such as being unable to make mortgage payments and needing to use community resources to get by each month (Wood & Parkinson, 2009). Mortgagees with NHE reported lower savings, higher debt, and higher mortgage payments than those with positive home equity (Wood & Parkinson, 2009). H1: having NHE will be positively associated with financial stress.

Financial education is associated with lower stress regarding daily finances and retirement preparation (Xiao & Kim, 2022). Education in general has also been found to be associated with lower levels of debt stress (Chen et al., 2021). H2: financial knowledge will be negatively associated with financial stress.

Insolvency occurs when someone does not have sufficient assets to repay their current liabilities. Households struggling to make debt payments may experience financial stress if they default on their loan. Being delinquent on debt payments for student loans and credit cards is associated with financial stress (Xiao & Kim, 2022). Similarly, research has shown that homeowners who have defaulted on their mortgages and are facing foreclosure experience stress and depression (e.g., Brown et al., 2005; Yilmazer et al., 2015) and financial stress (Prohaska & Lichtenstein, 2013; Xiao & Kim, 2022). H3: Financial Insolvency will be positively associated with financial stress

Lower risk tolerance has been associated with lower satisfaction with one's financial management skill set (Sages & Grable, 2010). However, higher risk tolerance has been associated with poor financial behaviors such as overdrawing a bank account and exceeding the limit on a credit card (Worthy et al., 2010). H4: Financial risk tolerance will be negatively associated with financial stress.

Lower levels of financial stress have been attributed to financial behaviors such as building and maintaining savings (Newfeld, 2020) while higher levels of financial stress have been attributed to financial behaviors such as insolvency and loan delinquency (Chen et al., 2021; Sweet et al., 2013; Xiao & Kim, 2022). H5: Financial behavior will be negatively associated with financial stress.

Methodology

Data and sample selection

The 2018 National Financial Capability Study (NFCS) was used for this study. The sample consisted of 7,389 non-retired homeowners with a mortgage. Retirees with a mortgage were excluded from the sample as their financial situation may be uniquely different and thus necessitate separate analysis. The data were weighted to provide nationally representative results.

Variables

The model included three latent variables (insolvency, financial behavior, and financial stress) and three observed variables (negative equity, financial knowledge, and risk tolerance). The latent variable, financial stress, consisted of three observed variables: *worry* ("I worry about running out of money in retirement"), *anxious* ("Thinking about my personal finances can make me feel anxious"), and *stressed* ("Discussing my finances can make my heart race or make me feel stressed"). Each was measured on a 7-point scale ranging from strongly disagree (1) to strongly agree (7). *NHE* was measured by "Do you currently owe more on your home than you think you could sell it for today?" (1 = yes; 0 = no). For the purposes of this research, NHE is considered an equivalent with Joo and Grable's (2004) concept of financial stressor in their framework.

The variable, *financial knowledge,* was measured on an index comprised of six financial knowledge questions and represents the objective financial knowledge of respondents. The latent variable, insolvency consisted of three observed variables which measured whether respondents were delinquent on their *mortgage*, *credit card*, and *student loan*. *Risk tolerance* was measured on a 10-point scale indicating how willing respondents were to take financial risks with their investments (1 = not willing, 10 = very willing). The latent variable, financial behavior consisted of three observed variables: *emergency fund* (1 = yes; 0 = no), *investments* (1 = yes; 0 = no), and *retirement plan* (1 = yes; 0 = no). Control variables consisted of demographic characteristics including age, gender, race/ethnicity, income, education, marital status, and presence of financially dependent children.

Model Analysis

This study used structural equation modeling (SEM) to assess each of the complex relationships among the variables in the conceptual model. The SEM procedure consists of two components: 1) assess the latent construct validity and 2) assess sequential relationships among the variables. Confirmatory factor analysis was used to assess the construct validity of the latent variables; the latent variables in the model were confirmed as being statistically robust. The sequential relationships were tested by path analysis. The model fit indices met the accepted thresholds. Missing values were treated by the full information maximum likelihood procedure (Enders & Bandalos, 2001). The model was run with Stata 16 and Mplus 8.

Results

Descriptive Statistics

Respondents were an average age of 44, most were female, white, married, held academic degrees, had an income at or above the median and had financially dependent children. Just under 20% reported having NHE. The mean financial knowledge score was 3.33 and the mean financial risk tolerance score was 5.79. Twenty-two percent reported mortgage delinquency, 21% reported credit card delinquency and 22% reported being delinquent on their student loan. Most respondents reporting positive financial behaviors meaning they reported having an emergency fund, having investments, and having a retirement plan. The financial stress of respondents was elevated across each of the three measures worry, anxious, and stressed.

Structural Equation Modeling Results

Detailed results including figures and tables will be shared in the presentation. A summary of the results is given here. NHE was significantly and positively associated with financial stress (as hypothesized), insolvency, risk tolerance, and financial behavior. Thus, those with NHE had higher financial stress, were more likely to be insolvent, had a higher risk tolerance and engaged in positive financial behaviors.

Financial knowledge was significantly and negatively associated with financial stress (as hypothesized); those with higher financial knowledge scores were less likely to have financial stress. Insolvency was significantly positively related to financial stress (as hypothesized). Thus, being insolvent as indicated by being delinquent on a mortgage, credit card or student loan, was associated with greater financial stress. Financial risk tolerance was significantly and positively associated with financial stress (not as hypothesized) and financial behavior. Those who were willing to take greater investment risks experienced more financial stress but were also more likely to engage in savings behaviors such as having an emergency fund, having investments, and a retirement plan. Financial behavior was significantly and negatively associated with financial stress (as hypothesized). Those who engaged in positive financial behaviors (had an emergency fund, investments, and retirement plan) were less likely to report financial stress. Other indirect relationships revealed through the SEM results will be discussed in the presentation.

Discussion and Implications

This study adapted Joo and Grable's (2004) conceptual framework for the determinants of financial satisfaction to examine the relationship between NHE and financial stress. The study findings confirm hypothesis 1 and show a direct and significant association between NHE and financial stress. This association is supported by prior research which found that NHE is associated with financial and debt stress (Chen et al., 2021; Wood & Parkinson, 2009). The greatest magnitude of effect on financial stress in the model was through a direct and significant association with insolvency. This latent variable captured whether or not respondents were delinquent on their mortgage, credit card, and student loan payments. Experiencing mortgage delinquency may lead to foreclosure and the loss of the home, this circumstance is clearly associated with financial stress (e.g., Prohaska & Lichtenstein, 2013; Xiao & Kim, 2022). Additional support for this study finding is documented in prior research that has shown that being delinquent on credit cards and student loan payments is associated with financial stress (Drentea, 2000; Xiao & Kim, 2022).

The model also showed a direct negative association with financial behavior. Behaviors such as saving and having investments may reduce financial stress as these behaviors provide a sense of financial security. This finding is support by prior research that has shown that savings is associated with lower financial stress (Newfeld, 2020) while higher levels of debt and lower levels of assets as associated with higher financial stress (Chen et al., 2021; Sweet et al., 2013; Xiao & Kim, 2022). Each hypothesis was supported with the exception of hypothesis 4. The relationship between financial risk tolerance and financial stress was significant but the direction was unexpectedly positive instead of negative. This may be because people with a high risk tolerance for investing may carry a certain level of financial stress derived from managing more risky investments (Callan & Johnson, 2002). Additional findings from the SEM model will be discussed in the presentation.

Practical Implications

Mortgagees with NHE are limited in their options for achieving positive home equity. Two clear pathways exist. They can remain in the home and pay down the mortgage over time while waiting for market values to increase. Or, if they have sufficient assets, they could sell the home (likely at a loss) and use existing assets to repay the remaining mortgage debt. Financial Counselors and Educators (FCE) can help walk their clients with NHE through a cost benefit analysis of their options and strategize with clients to maximize their financial well-being and minimize their financial stress. FCEs can also strategize with clients who have very little equity in their homes so that they can be aware of the possibility of NHE, and the consequences should it occur. FCEs are in a unique position to aid clients who have very little equity as they will have a good understanding of the client's short- and long-term goals (e.g., does the client plan to move in the near future). The study also explored the association between financial knowledge, financial behavior, and financial stress. The practical implications of those findings for FCEs will be shared in the presentation.

Limitations and Future Research
The study used cross sectional data which did not allow for a causal relationship between the variables and financial stress to be determined. Additionally, NHE was self-reported and thus susceptible to error. It was also a dichotomous variable; a continuous measure would have allowed for the varying degrees of NHE to be examined. Future research could consider collecting a continuous measure of NHE. Additional suggestions for future research will be discussed in the presentation.

References

Brown, S., Taylor, K., & Price, S. W. (2005) Debt and distress: Evaluating the psychological cost of credit, *Journal of Economic Psychology,* 26(5), 642–663.

Callan, V. J., & Johnson, M. (2002). Some guidelines for financial planners in measuring and advising clients about their levels of risk tolerance. *Journal of Personal Finance*, *1*(1), 31-44.

Chen, G., Jia, Q., Maskara, P. K., & Williams, A. (2021). Impact of financial debt on borrower's health based on gender, *International Journal of Consumer Studies,* 45(3), 423-440.

CoreLogic. (2021, December 9). *Homeowner equity insights: Data through Q4 2020*. https://www.corelogic.com/insights-download/homeowner-equity-report.aspx

CoreLogic (2023, March 9). *Homeowner Equity Insights - Q4 2022.* Homeowner Equity Report. https://www.corelogic.com/intelligence/homeowner-equity-insights-q4-2022/

Drentea, P. (2000). Age, debt, and anxiety. *Journal of Health and Social Behavior*, 41(4), 437– 50.

Enders, C. K., & Bandalos, D. L. (2001). The relative performance of full information maximum likelihood estimation for missing data in structural equation models. Structural Equation Modeling: A Multidisciplinary Journal, 8, 430-457.

Foote, C. L., Gerardi, K. S., & Willen, P. (2008). *Negative equity and foreclosure: Theory and evidence.* (Public Policy Discussion Papers, No. 08-3) SSRN Electronic Journal. 1-36. https://doi.org/10.2139/ssrn.1153413

Friedline, T., Chen, Z., & Morrow, S. P. (2021). Families' financial stress & well-being: The importance of the economy and economic environments. *Journal of Family and Economic Issues,* 42(S1), 34-51.

Gerardi, K., Herkenhoff, K. F., Ohanian, L. E., & Willen, P. S. (2018). Can't pay or won't pay? Unemployment, negative equity, and strategic default. *The Review of Financial Studies*, 31(3), 1098–1131.

Grable, J.E. (2015). Stress. In F.F. Wherry & J. Schor (Eds.), *The Sage Encyclopedia of Economics and Society.* Sage Publications, Inc.

Grable, J. E. (2016). Financial risk tolerance. In J. J. Xiao (Ed.), Handbook of consumer finance research (2nd ed.). Springer.

Joo, S., & Grable, J. E. (2004). An exploratory framework of the determinants of financial satisfaction. *Journal of Family and Economic Issues*, 25(1), 25-50.

Newfeld, D. A. (2020). Financial anxiety in the orthodox Jewish community. *Journal of Personal Finance*, 19(2), 25–36.

Prohaska, A., & Lichtenstein, B. (2013) Losing a home to mortgage foreclosure: Temporary setback or chronic stressor? *Social Justice*, 40(3), pp. 65–80.

Raymond, E. L. (2018). Race, uneven recovery and persistent negative equity in the southeastern united states. *Journal of Urban Affairs*, *40*(6), 824–837. https://doi.org/10.1080/07352166.2017.1392828

Sages, R. A., & Grable, J. E. (2010). Financial numeracy, net worth, and financial management skills: Client characteristics that differ based on financial risk tolerance. *Journal of financial service professionals*, *64*(6), 57-66.

Sweet, E., Nandi, A., Adam, E. K., & McDade, T. W. (2013). The high price of debt: Household financial debt and its impact on mental and physical health. *Social Science & Medicine*, 91, 94-100.

Wood, G. & Parkinson, S. (2009). *Negative equity and house price risk in Australia.* (Melbourne Institute, University of Melbourne).

Worthy, S.L., Jonkman, J. & Blinn-Pike, L. (2010). Sensation-seeking, risk-taking, and problematic financial behaviors of college students. *Journal of Family and Economic Issues,* 31(2), 161-170.

Xiao, J.J., & Kim, K.T. (2022) The able worry more? Debt delinquency, financial capability, and financial stress, *Journal of Family Economic Issues,* 43(1), 138–152.

Yilmazer, T., Babiarz, P., & Liu, F. (2015) The impact of diminished housing wealth on health in the United States: Evidence from the great recession, *Social Science & Medicine*, *130*, 234–241.

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The Effect of Investment Worry on Sources Chosen for Financial Information

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Abstract

Despite our intuitive appreciation of the power and influence of our emotions, gaps remain in what we understand of its relationship with behaviors within the personal finance domain. This study aimed to address this by examining the emotion of investment worry and its influence on where individuals may turn for financial information. The information source framework (Beales et al., 1981) was combined with the information search process model (Kuhlthau et al., 2008) to provide theoretical support for investigating the association between investment worry and sources chosen for financial information. Results showed that investment worry can directly influence the choice for some types of financial information sources. Interestingly, financial knowledge did not mediate the influence of investment worry on any of the information sources examined. It is important that financial professionals consider whether individuals who are worried about their investments turn to professionals for financial information or if they are more likely to rely on other sources such as trusted friends and family as it would help them reach their targeted audience more effectively. Not all information sources are effective targets for reaching those who are experiencing worry about their investments.

Background

The increased complexity of financial products and information (Fan & Chatterjee, 2017), along with recent market volatility and economic concerns that have arisen in the post-Covid environment, have been cited in recent headlines as factors driving investor worries (Hyzy, 2022; Idzelis, 2022; Klebnikov, 2022; La Monica, 2022). Financial services firms have responded by offering an abundance of financial advice, analysis, and educational materials for the public to consume (Fidelity, 2022; Hyzy, 2022; Schwab, n.d.). Additionally, easy access to trading through digital trading apps and increased access to investment tools are some of the recent trends contributing to a surge of more than 10 million new retail investors opening brokerage accounts since 2020 (Deloitte, n.d.). These dynamics have boosted the current appetite for access to real-time investment information from retail investors. Deloitte (n.d.) argues that social media plays an important role in how new investors receive and process information, increasing collective knowledge while providing a place for sharing and sharpening investment strategies.

Purpose

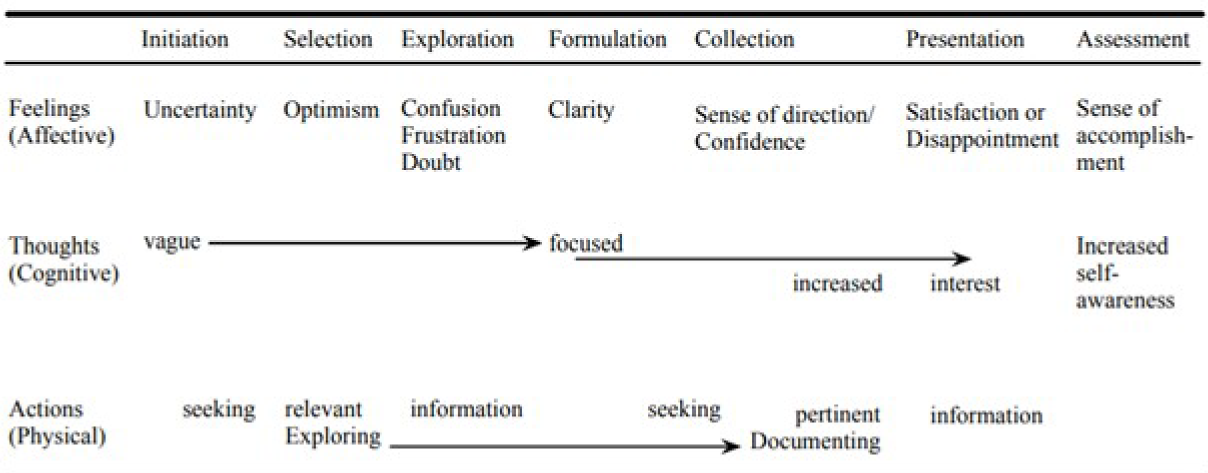
The extant literature on information-seeking preferences and behaviors has primarily focused on the benefits of financial professionals and the characteristics of those who seek their advice. However, this study considered financial advice from professionals as just one form of financial information. Empirical findings have shown that information source preferences often differ based on demographic factors, such as age, gender, race, income, and education level (Chang, 2005; Gill & Bhattacharya, 2017; Rhine & Touissant-Comeau, 2002). Further, psychological constructs, such as personality traits, have also been found to influence preferences for financial information sources. For example, Chatterjee and Fan (2021) identified neuroticism as a personality trait significantly associated with seeking financial advice from family and friends whereas Fan and Lim (2022) found that mental distress was negatively associated with seeking advice from family. They instead found that individuals experiencing mental distress were more likely to seek advice from professionals and social networks. Thus far, however, limited empirical research has included the role emotions play in the search for financial information. Research focused on the role psychological and emotional constructs play in directing where individuals source their financial information would be beneficial to financial professionals, such as counselors, therapists, and planners, by adding insight into how individuals cope with emotions related to their financial condition. It would also provide support for strategies aimed at getting useful, accurate financial information to those who seek it. The purpose of this study was to investigate the association between the emotional construct of investment worry and the choice of financial information source. This study also considers mechanisms for why (i.e., mediators) certain external sources may be chosen.

Theoretical Framework and Related Literature

Theoretical models and frameworks related to information search have attempted to explain information search from the perspective of economic utility, source types, and search processes. From an economic perspective, information has economic value, and this value can be measured as the amount of benefit that exceeds the expected cost of gathering the information (Stigler, 1961). The literature on information search frameworks categorized sources of information into two types, internal and external sources. Beales and his colleagues (1981) outlined information acquisition strategies from the perspective that different information gathering methods or sources may be used for different kinds of information. Internal information sources include information obtained from memory, either actively acquired in the past or passively acquired, while external information sources require actively seeking new information from outside sources. An example of passively acquired information could include gleaning information from a billboard or advertisement on a drive to work, while an example of actively acquired past information would be experience from past personal use of the item an individual seeks information about. Internal sources are often used first because it is easy to access and the cost is simply the cognitive effort required to access it (Beales et al., 1981), which aligns with Stigler's (1961) cost-benefit framework.

The information source framework has been extended with the information search process model which was developed in the field of library and information science (see Figure 1.1). This model includes affective, cognitive, and physical components to the search process which, according to the model, occurs in six stages: initiation, selection, exploration, formulation, collection, and presentation (Kuhlthau et al., 2008). This study was focused on the first two stages—initiation and selection. In the initiation stage, an individual recognizes a need for information which is accompanied by the affect, or feeling, of uncertainty. The cognitive components of this stage include thinking about the problem and connecting it to prior experience or internal knowledge. From here an individual moves to the selection stage. During the selection stage, an individual would identify the approach to the search process they will take and experience a feeling of optimism in response to their readiness to begin the search.

Figure 1.1
The Kuhlthau Model of Information Search Process



Note. Source: Kuhlthau et al., 2008.

Figure 1.2 illustrates the components of this study's conceptual model. The initiation and selection stages of the information search process model were used to investigate the influence of the affect, investment worry, on the sources chosen for financial information. Cognitive thoughts provided the theoretical basis for examining the use of internal sources for financial information while the physical actions portion of the model supported the examination of external information sources. Stigler's (1961) cost-benefit framework was used to examine specific types of external financial information sources.

Figure 1.2
Conceptual Model for Information Search for Financial Information

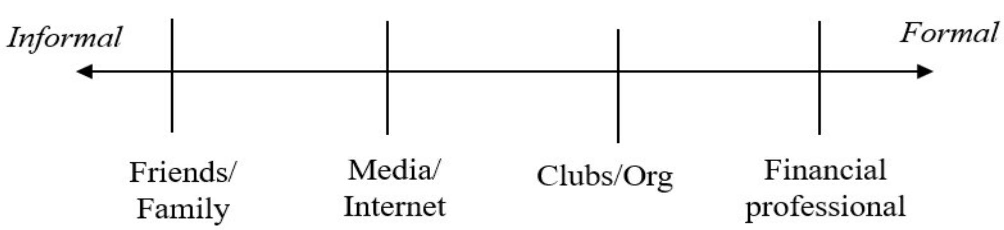
	Initiation		Selection
Feelings (Affect)	Financial worry	→	
Thoughts (Cognition)	Internal source	→	
Action (Physical)			External Source

Note. Adapted from The Kuhlthau Model of Information Search Process.

Information Sources

Following the framework outlined by Beales et al. (1981), information sources were grouped into three categories: internal, informal external, or formal external. Internal information sources are derived primarily from memories and past experiences. Beales et al. (1981) explained that memories that serve as internal information sources are most often created with passive observations, e.g., exposure to advertising or watching others. In contrast, informal and formal external information sources require the individual to actively seek out information. Informal external sources of information are generally accessible without incurring a high explicit cost. For example, traditional and social media, the internet, friends and family, and similar types of information sources would fit into this category. For this study, formal external information sources referred to information from an 'information expert'. Beales and his colleagues (1981) described an information expert as a professional who accumulates a body of knowledge more efficiently than an individual could on their own. The professional is then positioned to share their expertise when needed. However, the authors noted that an individual would incur a cost of time and money when using this source of information. Given this context, external information sources were defined on a spectrum ranging from informal (i.e., family/friends) to formal (i.e., financial professionals). As illustrated in Figure 2.4, the spectrum reflects internal sources as more intimate and familiar and moves through to more arm's length relationships with professional sources at the formal end of the range of external sources.

Figure 1.3
Informal-to-Formal Spectrum for External Information Sources



Factors Related to Information Sources and Research Hypotheses

Methods of communication have changed over time and newer technologies have become popular, for example social media and online or web-based options. Consequently, researchers have examined preferences for these more modern delivery modes to investigate their attractiveness as a source of financial information. Fan and Chatterjee (2020) investigated the fintech trend of using automated financial advisors, also referred to as robo-advisors, for investment advice. They found subjective financial and investment knowledge, along with participation in investment clubs, to be significant factors in the decision to rely on digitally delivered financial advice. With subjective financial knowledge used as a measure of internal information sources, their findings showed significant relationships between both internal and external information sources and automated investment advice. While these types of studies are informative, the literature has not considered emotions such as investment worry as motivators for internal information sources of any type.

Demographic factors have been examined to understand differences in accessing financial information. For example, gender differences in learning styles (Rhine & Toussaint-Comeau, 2002) and self-confidence (Hanna, 2011) have been offered as factors influencing where men and women seek out information. Racial minorities have also been found to be more likely to turn to informal information sources such as advice from family, friends, and social groups (Blanchett, 2019; Rhine & Toussaint-Comeau, 2002; Rubio, 2013; Stevenson & Plath, 2002). However, paid advice has been preferred in specific cases, such as for credit, borrowing, and investment decisions (Chang, 2005; Elmerick et al., 2002; Hanna, 2011). Not surprisingly, wealth measures such as income and assets have been found to be positively associated with using professional sources for financial information as well (Chang, 2005; Chatterjee & Fan, 2021; Letkiewicz et al., 2016). These findings support including the demographic measures of race, gender, and income as control variables in this study.

Preferences for Internal Information Sources

As discussed earlier, internal information sources can be retrieved from memories acquired in one of two ways, passively or from prior experiences (Beales et al., 1981). Researchers have argued that internal financial information resources would reflect an individual's level of education and financial knowledge (Fan & Chatterjee, 2017; Lusardi & Mitchell, 2017). Fan and Chatterjee (2017) also posited that this would influence a person's ability to filter through information and process the choices they face. This perspective has been used to support the use of objective financial knowledge and investor confidence as measures that reflect internal information sources (Fan & Chatterjee, 2017; 2020).

The Kuhlthau model of the information search process predicts that affect and cognition are present in the initiation stage of the search process. In this stage, the affective component reflects the uncertainty created by the recognition of a need for information while the cognitive component includes accessing internal knowledge or prior experiences. This model, along with the empirical research discussed, supported investigating the following hypothesis:

> H_1: There is a positive relationship between investment worry and the use of internal information sources (objective financial knowledge).

In this study, investor confidence was selected to model prior experiences as described in the cognitive component of the conceptual model. Researchers have argued that perceptions from past experiences can serve as antecedents to confidence (Bearden et al., 2001; Oney & Oksuzoglu-Guven, 2015; Stajkovic, 2006). While scholars have explained there is no universally accepted definition of confidence, the concept has been broadly defined to include, "an opinion, attitude, act of conduct, expectation, and a manner of behavior" (Simintiras et al., 2014, p. 427). Further, studies of consumer behavior have identified confidence as a factor used by consumers when they seek information (Bearden et al., 2001; Oney & Oksuzoglu-Guven, 2015; Simintiras et al., 2014).

Preferences for Informal External Information Sources

Non-professional sources of financial information, referred to in this study as 'informal' sources, are often a less costly, more convenient source of information that has been used differently by different demographics. For example, the internet has trended as a more common source of financial information than family and friends across age groups (Blanchett, 2019). When used as a source of financial information, friends were relied on by those with higher incomes but lower education levels whereas the internet was used by those with lower levels of income but higher levels of education (Blanchett, 2019). Chang (2005) suggested that informal social networks can also be more trusted than professionals whose advice may be viewed as tainted by an economic incentive to mislead or deceive them.

Preferences for Formal External Information Sources

For this study, the general title of 'financial professional' was used as a broad term that captures the many designations currently in use. Financial professionals were categorized as formal external sources of financial information due to their specialized expertise and cost. The demand for professional financial advice has been studied extensively in the literature (Cheng et al., 2019; Hanna, 2011; Robb et al., 2012). Using data from the 1998 to 2007 Survey of Consumer Finances, Hanna (2011) documented an increase in the demand for financial planning services over that period. Robb et al. (2012) identified objective and subjective financial knowledge and confidence in money management skills as factors positively related to seeking professional advice. The empirical findings of Cheng and his fellow researchers (2019) supported the premise that the advice provided by financial professionals are a normal good whose demand decreases as income falls. In that study, they explored who hired or fired their financial professional during the Great Recession.

Scholars have also investigated who uses financial professionals for advice. Early studies found that the type of information needed, e.g., debt or credit counseling versus saving and investing information, was the primary driver of this decision (Elmerick et al., 2002). Relatedly, an Australian study of men who became unemployed found feelings of shame and embarrassment around financial matters to be barriers to seeking professional financial help (du Plessis et al., 2010). The current study modeled the selection stage of the Kuhlthau model as external information sources to reflect actively pursuing information based on the individual's needs. Based on the literature, both formal and informal external sources have been used by individuals experiencing financial stressors; therefore, the following hypotheses were investigated:

H_2: There is a positive relationship between investment worry and the use of external information sources.

H_{2a}: There is a positive relationship between investment worry and the use of friends and family sources.

H_{2b}: There is a positive relationship between investment worry and the use of media and internet sources.

H_{2c}: There is a positive relationship between investment worry and the use of clubs and organization sources.

H_{2d}: There is a positive relationship between investment worry and the use of professional financial sources.

Investment Worry and Information Search

In addition to expected concerns around individual investment performance, headlines have highlighted a laundry list of investor worries that include inflation, rising interest rates, market volatility, economic growth, and the potential for an economic recession (Hyzy, 2022; Idzelis, 2022; Klebnikov, 2022; La Monica, 2022). Media coverage of investor worries has reported that recent performance has been so volatile that it has scared investors away from investing in the market (Reinicke, 2022). According to a study by Allianz Life (2022, April 27), titled the *2022 Q1 Quarterly Market Perceptions Study*, the percentage of investors reported to be too worried about market volatility to invest is at its highest level since 2019 (43%). The survey was given to a nationally representative sample of 1,002 adults. Financial services firms provide an abundance of publicly available advice columns, podcasts, and research materials for clients and potential investors to peruse (Fidelity, 2022; Hyzy, 2022; Schwab, n.d.). However, to the author's knowledge, there is limited empirical research reported in the literature that has investigated investor worries as a factor that drives individuals to access this information from the information sources that offer it.

Affect has been shown to influence who individuals reach out to for financial advice. Financially stressed individuals cited media as the most popular source of information, followed by professional advice (Kim and Kim, 2010). However, Fan and Lim (2022) found that those experiencing mental distress were positively associated with using financial professionals and social networks while showing a negative association with relying on family for financial advice. Using the National Financial Well-Being Survey, the authors also explored the role cognitive ability plays in the decision to seek advice from professionals. Interestingly, they found family to be the most prominent source of financial advice among advice seekers and the cognitive factors of memory and objective numeracy to be positively associated with this source of financial information.

Prior research supports the prediction that financial knowledge is a factor related to the choice for informal and formal external financial information sources. For example, print media has been found to be a top choice for financial information among those with low levels of financial literacy (Rhine & Touissant-Comeau, 2002). Other scholars have identified both positive (Robb et al., 2012) and negative (Hanna, 2011) associations between investor confidence and seeking paid professional advice. Although investor confidence is not a specific type of information source, it is a resource that can be accessed internally and potentially influence the decision around where to seek out financial information. It was for this reason, and because of the inclusion of this measure for the internal information source construct in prior studies (Fan, 2021), that investor confidence was included in the model but not included in the hypothesized relationships tested. Therefore, the final hypotheses state:

H_3: The relationship between investment worry and the use of external information sources is mediated by internal information sources.

H_{3a}: The relationship between investment worry and the use of friends and family sources is mediated by objective financial knowledge.

H_{3b}: The relationship between investment worry and the use of media and internet sources is mediated by objective financial knowledge.

H_{3c}: The relationship between investment worry and the use of clubs and organization sources is mediated by objective financial knowledge.

H_{3d}: The relationship between investment worry and the use of professional financial sources is mediated by objective financial knowledge.

In summary, we posit that investment worry influences the source chosen for financial information. Objective financial knowledge is expected to mediate the relationship between investment worry and external information sources. Understanding the impact emotions may have on the choice for financial information will inform practitioners on where to place information pertinent to the needs of their clients and prospective clients.

Methods

Data

To examine the relationship between investment worry and the sources chosen for financial information, cross-sectional data from the 2018 National Financial Capability Study's State-by-State survey (NFCS-SS) and Investor survey supplement (NFCS-IS) was used. The 2018 NFCS-SS sample included a demographic mix by age, gender, marital status, education levels and employment status with a sample size of 27,091 adults. The NFCS-IS is a subset of the larger 2018 NFCS-SS sample and included 2,003 adults—age 18 and older. The respondents had to have completed the 2018 NFCS-SS, have investments outside of their retirement accounts and be involved in investment decision-making to qualify. This survey aimed to explore investing related topics and appears to be generalizable to the investing population of U.S. investors (Arc Research, 2018).

Dependent Variable

Information source was the dependent variable for this study. Information sources were grouped into the following categories: internal information source, informal external information source, and formal external information source. Consistent with prior research, internal information sources were operationalized with measures of objective financial knowledge (Fan, 2021; Fan & Chatterjee, 2017, 2020). Objective financial knowledge reflects the cognitive component of the conceptual model tested in this study. It was measured with a dummy variable comprised of six financial literacy questions used in previous research to gauge basic financial knowledge (Lusardi & Mitchell, 2007; Fan & Chatterjee, 2020; Table 1.1). The questions assessed knowledge of concepts such as compounding interest, bond pricing, and portfolio diversification. The correct answer to each question was assigned a value of 1, with all other responses assigned a value of 0. Then, the six responses were summed to create a composite objective financial knowledge score. The objective financial knowledge variable was coded on a scale ranging from (0) *very low* to (6) *very high*.

Table 1.1

Measurement of Objective Financial Knowledge

Measurement Question	Responses
	Recoded to binary
Suppose you had $100 in a savings account and the interest rate was 2% per year. After 5 years, how much do you think you would have in the account if you left the money to grow?	(1) *More than $102*, (0) *Exactly $102,* or *Less than $102*
Imagine that the interest rate on your savings account was 1% per year and inflation was 2% per year. After 1 year, how much would you be able to buy with the money in this account?	(1) *Less than today*, (0) *More than today,* or *Exactly the same*
If interest rates rise, what will typically happen to bond prices?	(1) *They will fall*, (0) *They will rise,* or *They will stay the same*

Suppose you owe $1,000 on a loan and the interest rate you are charged is 20% per year compounded annually. If you didn't pay anything off, at this interest rate, how many years would it take for the amount you owe to double?	(1) *At least 2 years but less than 5 years*, (0) *Less than 2 years*, or *At least 5 years but less than 10 years*, or *At least 10 years*
	Dichotomous variable
A 15-year mortgage typically requires higher monthly payments than a 30-year mortgage, but the total interest paid over the life of the loan will be less.	(1) *True* (0) *False*
	Reverse coded
Buying a single company's stock usually provides a safer return than a stock mutual fund.	*(1) False* (0) *True*

External sources were measured with the prompt asking respondents, *which of the following information sources do you use when making an investment decision*? Each external source was coded with a dichotomous response of (1) *yes*, or (0) *no*. The full listing of the source assigned to each category was summarized in Table 1.2.

Table 1.2
Measurement of External Information Sources

Variable	Measurement Question	Response
Informal External Information Sources		
Friends/Family	Friends, colleagues, or family members	(1) *Yes* or (0) *No*
Media/Internet	Information from the company you are investing in (e.g., annual reports, company websites)	(1) *Yes* or (0) *No*
	Information from brokerage firms, mutual fund companies, or other financial services companies (e.g., research reports, brochures, newsletters, seminars, websites)	(1) *Yes* or (0) *No*
	The media (i.e., TV, radio, newspapers, magazines, online news sources, and financial information sources)	(1) *Yes* or (0) *No*
Clubs/Organizations	Investment clubs or investor membership organizations	(1) *Yes* or (0) *No*
Formal External Information Sources		
Professionals	Stockbrokers	(1) *Yes* or (0) *No*
	Financial advisors other than stockbrokers	(1) *Yes* or (0) *No*

Independent Variables

Investment worry. The key independent variable was investment worry and was operationalized with the survey question asking respondents, "*over the next 12 months, how well do you expect your portfolio of investments to perform?*" Responses were categorized as (1) *worse than the market as a whole*, (0) *about the same as the rest of the market as a whole,* or (-1) *better than the market as a whole*. This measure sought to reflect investor worries as identified in surveys exploring investor sentiment. For example, in the *2022 Q1 Quarterly Market Perceptions Study*, Allianz Life (2022, April 27) reported that 56% of respondents were worried about a big market crash which was the highest level of worry reported than any time in the prior year. In the following survey, the *2022 2Q Quarterly Market Perceptions Study*, an increased percentage of respondents reported keeping more money than they should out of the market (65%), up from 54% in 2020 (Allianz Life, 2022 July 25). Investment worry was used to measure the affective component of the Kuhlthau model of the information search process.

Demographic and control variables. The demographic variables of age, gender, race, education, and marital status have been previously established as explanatory variables for predicting the source of financial information chosen and were included in the model. Similarly, investor confidence has been used as a measure to predict the use of external information search sources, so it was also included as a control variable in the model.

Data Analytic Plan

A path analytic model was used to examine hypothesized relationships between investment worry and internal and external information sources. Figure 1.2 displays the hypothesized model. Path analysis is a structural equation model for observed variables. This statistical technique was chosen because it allows for the testing of simultaneous regressions (Muthén & Muthén, 2017). Stata/SE statistical software, version 17, was used for data coding and a descriptive sample analysis (StataCorp, 2021). The path analysis was then conducted using Mplus statistical software, version 8.8, to examine model fit along with the direct and indirect effects in the model (Muthén & Muthén, 2017). This study considered multiple model fit indices which were used as a tool for model improvement alongside theory to support the model since alternative guidelines deemed appropriate for non-continuous data have not yet been identified and tested. Listwise deletion was used to handle missing data.

The analytic method used in Mplus was mean and variance adjusted weighted least squares (WLSMV). This is a probit-based analysis and is necessary due to the presence of dichotomous and categorical indicators (Kline, 2016; Muthén & Muthén, 2017; Wang & Wang, 2012). For testing indirect paths, bootstrapping was used to create confidence intervals. Bootstrapping is a nonparametric resampling procedure and is the recommended approach to test indirect paths and mediation (Briggs, 2006; Preacher & Hayes, 2004; Shrout & Bolger, 2002). To adjust for standard errors, results were bootstrapped with 2,000 iterations and then interpreted based on a 95% confidence interval.

Three models were examined in this study as recommended by researchers who have outlined an approach for testing mediational hypotheses (Baron & Kenny, 1986; Kenny, 2021). First, model one examined the direct relationship between external information sources and investment worry. Model two then included only internal information sources—the potential mediator in the full model, demographic covariates, and investment worry to test for a direct effect between investment worry and the potential mediator. Finally, model three was the full path model which included both internal and external information sources, demographic covariates, and the control variable to test for relationships between the variables and to test for the mediating role of the internal source.

Results

Descriptive Statistics

The full analytic sample consisted of 2,003 U.S. adults with an average age of 57. Most of the weighted sample was married (63.50%), male (61.29%) and white (75.82%), with a bachelor's degree or higher (79.37%). Household income was categorized into five groups, with the average income in the $75,000 to $99,999 group. A large majority of the sample reported expectations of investment performance better than (30.57%) or the same as (66.11%) the market. A summary of both weighted and unweighted descriptive statistics for categorical variables is provided in Table 1.3.

Table 1.3 (n = 1,815)

Sample Characteristics of Categorical Variables (n = 1,815)

	n	% (unweighted)	% (weighted)
Investment worry			
Worse than the market	62	3.42	3.32
Same as the market	1,214	66.89	66.11
Better than the market	539	29.70	30.57
Control variables			
Age			
Younger than 50	543	29.92	31.78
50 and older	1,272	70.08	68.22
Gender			
Male	1,050	57.85	61.29
Female	765	42.15	38.71
Race			
White/Caucasian	1,498	82.53	75.82
Non-White	317	17.47	24.18
Marital status			

Married	1,165	64.19	63.50
Not married	650	35.81	36.50
Education			
Less than BS	296	16.31	20.63
Bachelor's degree or higher	1,519	83.69	79.37
Income			
Less than \$100K	840	46.28	48.10
\$100K or more	975	53.72	51.90

The weighted mean scores for objective financial knowledge and investor confidence were 4.12 and 4.89, respectively. Objective financial knowledge was measured on a 6-point Likert-type scale, whereas investor confidence was measured on a 7-point Likert-type scale. Media/internet (82.71%) and financial professionals (67.91%) were the most reported external information sources, followed by friends/family (38.82%) and clubs/organizations (12.88%), respectively.

Path Analysis

Path analysis was used to test the relationships between investment worry and external information sources, as well as to test for the mediating role of internal information sources. In addition to theoretical predictions of accessing internal information once affect is triggered, the consideration of an internal source's role as a mediator to external sources was supported by descriptions of mediators as often internal and psychological in nature (Baron & Kenny, 1986).

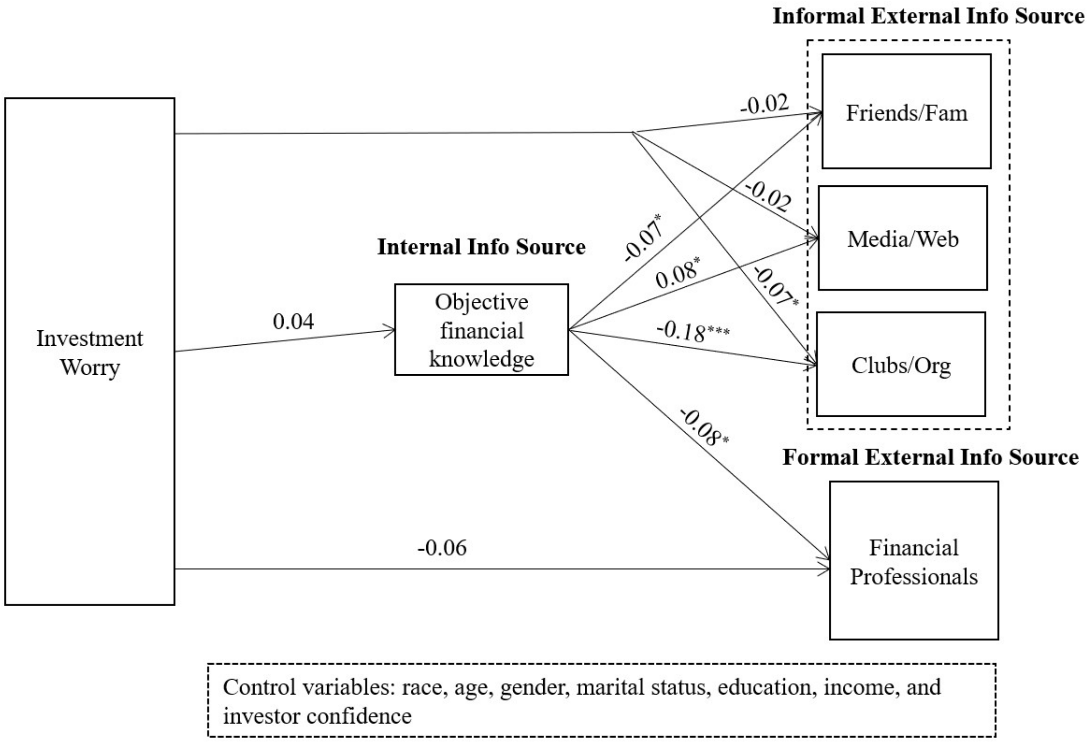
As outlined in Baron and Kenny (1986), models one and two were initially examined to establish that investment worry affects the choice for the external information sources (model one) and that it also affects the choice for internal information sources (model two). The authors explained that these relationships should be established before testing for mediation. Model one showed inverse relationships between investment worry and all the external information sources except family/friends which was not significant. Media/internet ($\beta = -0.08$, $p < 0.05$), clubs/organizations ($\beta = -0.13$, $p < 0.001$), and financial professionals ($\beta = -0.06$, $p < 0.05$) were each inversely related to investment worry when internal sources were not included in the model. Model two showed no significant relationship with objective financial knowledge.

The full model was a just-identified model which suggests the model perfectly fits the data (Kline, 2016). Model fit statistics were chi-square (χ^2) = 757.32, $p < .001$, comparative fit index (CFI) and Tucker-Lewis index (TLI) = 1.00, and a standardized root mean squared residual (SRMR) and root mean-squared error of approximation (RMSEA) = 0.00. Figure 1.3 illustrates results for the full conceptualized model showing standardized beta coefficients. Paths to the demographic covariates and control variable were omitted from the illustration for the sake of brevity but they were included in the model. Theory predicted that once an individual experiences an affect related to the need for information, they would access their internal information sources first, then turn to external sources. Thus, the hypotheses tested in this study focused on specific types of information sources.

The path from investment worry to objective financial knowledge was not significant in the full model and therefore did not support H_1. However, the direct path from investment worry to clubs/organizations showed these measures to be significant but inversely related ($\beta = -0.07$, $p < 0.05$) which did not support the direction predicted in H_{2c}. No other direct paths between investment worry and the remaining external information sources were significant so results provided no evidence to support H_{2a}, H_{2b}, or H_{2d}.

Figure 1.3

Standardized Coefficients for Direct Paths in the Full Path Model



Note. n = 1,815; $\chi^2[50] = 757.32$, $p < .001$, $RMSEA = 0.00$, $CFI = 1.00$, $TLI = 1.00$, $SRMR = 0.00$; $^{*}p < .05$, $^{**}p < .01$, $^{***}p < .001$.

Although relationships between internal and external sources were not hypothesized, results showed interesting relationships. Direct paths from objective financial knowledge to external information sources showed mixed relationships. Objective financial knowledge was inversely related to financial professionals ($\beta = -0.08$, $p < 0.05$), as well as family/friends ($\beta = -0.07$, $p < 0.05$) and clubs/organizations ($\beta = -0.18$, $p < 0.001$). Yet, this measure of internal information source was positively related to media/internet ($\beta = 0.10$, $p < 0.01$). As mentioned, this relationship was outside the scope of this study's focus on the relationship between investment worry and these information sources, however these findings suggest that future examination of attributes related to the emotions associated with the information search process may explain the direction of the relationships found and would expand our understanding of the role emotions play in sourcing financial information.

Surprisingly, indirect paths through objective financial knowledge to external information sources were not significant and therefore did not support H_3 (a – d). Hypothesis three posited a positive relationship between investment worry and external information sources through objective financial knowledge. Total, direct, and indirect effects for each structural path are shown in Table 1.4.

Table 1.4

Standardized Estimates for Path Analysis (n = 1,815)

Structural Path	Total Effect (95% CI)	Direct Effect (95% CI)	Indirect Effect (95% CI)
Direct Paths			
IW -> MI	-0.02(-0.09/0.05)	-0.02(-0.09/0.05)	-0.00(0.00/0.01)
IW -> CO	-0.08*(-0.14/0.00)	-0.07*(-0.14/0.00)	-0.01(-0.02/0.00)
IW -> FF	-0.02(-0.08/0.04)	-0.02(-0.08/0.04)	-0.00(-0.01/0.00)
IW -> FP	-0.06(-0.13/0.01)	-0.06(-0.11/0.01)	-0.00(-0.02/0.00)
Indirect Paths			

IW -> OK -> MI	0.00(0.00/0.01)
IW -> OK -> CO	-0.01(-0.02/0.00)
IW -> OK -> FF	-0.00(-0.01/0.00)
IW -> OK -> FP	-0.00(-0.01/0.00)

Note. IW-investment worry, MI-media/internet, CO-clubs/org, FF-family/friends, FP-financial professionals, OK-objective financial knowledge; $\chi^2[50] = 757.32$, $p < .001$, $RMSEA = 0.00$, $CFI = 1.00$, $TLI = 1.00$, $SRMR = 0.00$; $^{*}p < .05$, $^{**}p < .01$, $^{***}p < .001$.

Discussion

The purpose of this study was to investigate the association between investment worry and sources chosen for financial information. The information source framework outlined by Beales and his colleagues (1981), along with the information search process (Kuhlthau et al., 2008), provided the theoretical framework for testing each of the hypotheses outlined in the paper. Results of the path analysis show that investment worry can directly influence the choice for some types of financial information sources, after controlling for a variety of demographic factors. However, the significant path found between investment worry and clubs/organizations showed an inverse relationship. This was an unexpected finding but may reflect a characteristic of this information source that makes it less attractive when an individual is experiencing investment worry. For example, turning to clubs/organizations may feel like a public announcement of a person's financial situation which could make this source unattractive when a person is experiencing the emotion of investment worry.

Limitations

Several limitations of this study should be noted. First, cross-sectional data was used which does not allow for an assessment of changes over time or under various conditions in preferences for financial information sources, the key endogenous variable in the study. Additionally, this study closely followed the theoretical framework outlined by Kuhlthau et al. (2008) which predicted that the affect triggered by the recognition of a need for information is followed by accessing internal information sources, then seeking external sources. This sequencing drove the decision to focus on the mediating role of internal information sources versus considering internal information sources as moderators of investment worry.

Next, the path model used for analysis can only establish relationships between the variables included in the model, thus it does not establish causation. Further, the measures used to operationalize the key variables in the study did not perfectly align with the timeframe proposed in the theory. Investment worry was measured with a question that asked about their current beliefs about future investment performance while the question used to operationalize financial information sources also asked about current behaviors. This limits the ability to make predictions related to which variable came first.

As previously discussed, external financial information sources were considered on a spectrum ranging from informal to formal. However, categorizing the sources as informal or formal was subjective and relied on descriptions found in prior research. For example, financial professionals have been described as a higher cost, often a more comprehensive and personalized source of financial expertise (Cheng et al., 2019; Fan, 2021; Finke et al., 2011). This information source was considered formal for this study and all others considered informal. Nevertheless, information sources may straddle categories or may not precisely fit into the categories assigned, which represents a limitation of the data.

Missing data that was removed using listwise deletion could bias the sample. While it is not uncommon for survey data to have missing values that are not MCAR, missing values that are not MCAR risks providing sample data that is affected by some form of bias. Finally, only a small portion of the sample reported investment worry which limits the ability to generalize the findings. The self-reported scale used to measure investment worry also may not reflect the respondent's true level of investment worry, given the risk of reporting what they may have wanted the interviewer to believe. This may introduce a response bias, such as social desirability bias, to the sample data.

Implications and Conclusion

In summary, this is the first study to explore the relationship between investment worry and financial information sources. While some results aligned with expectations for significant relationships between investment worry and external sources, the direct inverse relationships were unexpected. The mixed findings support the need for further research examining the role of emotions in financial decision-making. For example, a comparison of the influence of positive and negative emotions on information source preferences would be informative for practitioners to help predict when client behaviors may change or when information strategies may need to be adjusted.

Empirical research that investigates the relationship between investment worry and preferences for where to source financial information is informative for practitioners. The results can aid financial professionals in decisions around the strategic placement of helpful financial information where consumers would be most likely to access and receive it. This study also provides insight into who individuals may or may not turn to when looking to cope with emotions related to their financial condition. An understanding of how individuals respond to investment worry positions practitioners, such as financial planners and counselors, to develop tools that can help clients manage its influence.

References

Allianz. (2022, April 27). Market risks and world tensions are making Americans pessimistic about the economy. 2022 press releases. https://www.allianzlife.com/about/newsroom/2022-press-releases/market-risks-making-americans-pessimistic-about-the-economy

Allianz. (2022, July 25). The most worry in years: Americans are increasingly anxious about a recession as inflation cuts into spending power. 2022 press releases. https://www.allianzlife.com/About/Newsroom/2022-Press-Releases/Americans-Are-Increasingly-Anxious-About-a-Recession-As-Inflation-Cuts-into-Spending-Power

Arc Research LLC (2018). *2018 National Financial Capabilities Study: Investor Survey Methodology*.

Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, *51*(6), 1173–1182. https://doi.org/10.1037/0022-3514.51.6.1173

Beales, H., Craswell, R., & Salop, S. C. (1981). The efficient regulation of consumer information. *The Journal of Law and Economics, 24*(3). 491-539.

Bearden, W. O., Hardesty, D. M., & Rose, R. L. (2001). Consumer self-confidence: Refinements in conceptualization and measurement. *The Journal of Consumer Research*, *28*(1), 121–134. https://doi.org/10.1086/321951

Blanchett, D. (2019). Financially sound households use financial planners, not transactional advisers. *Journal of Financial Planning, 32*(4), 30-40.

Briggs, N. E. (2006). *Estimation of the standard error and confidence interval of the indirect effect in multiple mediator models*. The Ohio State University/OhioLINK.

Chang, M. L. (2005). With a little help from my friends (and my financial planner). *Social Forces*, *83*(4), 1469-1497.

Chatterjee, S., & Fan, L. (2021). Older adults' life satisfaction: The roles of seeking financial advice and personality traits. *Journal of Financial Therapy, 12*(1), 4.

Cheng, Y., Kalenkoski, C. M., & Gibson, P. (2019). Factors associated with hiring and firing financial advisors during the Great Recession. *Financial Counseling and Planning*, *30*(2), 289–303. https://doi.org/10.1891/1052-3073.30.2.289

Deloitte. (n.d.). *The rise of newly empowered retail investors*. https://www2.deloitte.com/us/en/pages/financial-services/articles/the-future-of-retail-brokerage.html

du Plessis, K., Lawton, J., & Corney, T. (2010). Unemployed and struggling: The lack of financial help-seeking behavior exhibited by male construction workers. *The Australian Journal of Financial Planning, 6*(1), 1-8.

Elmerick, S. A., Montalto, C. P., & Fox, J. J. (2002). Use of financial planners by U.S. households. *Financial Services Review*, *11*(3), 217-231.

Fan, L. (2021). Information search, financial advice use, and consumer financial behavior. *Journal of Financial Counseling and Planning*. *32*(1), 21–34. https://doi.org/10.1891/JFCP-18-00086

Fan, L., & Chatterjee, S. (2017). Borrowing decision of households: An examination of the information search process. *Journal of Financial Counseling and Planning, 28*(1), 95-106. https://doi.org/10.1891/1052-3073.28.1.95

Fan, L., & Chatterjee, S. (2020). The utilization of robo-advisors by individual investors: An analysis using diffusion of innovation and information search frameworks. *Journal of Financial Counseling and Planning, 31*(1), 130-145. https://doi.org/10.1891/JFCP-18-00078

Fan, L., & Lim, H. (2022). Cognitive abilities and seeking financial advice: Differences in advice sources. *Journal of Financial Counseling and Planning, 33*(1), 97-114. https://doi.org/10.1891/JFCP-19-00079

Fidelity. (2022, June 22). *Three risks we're watching in the second half. How to manage what lies ahead: Don't panic*. Fidelity viewpoints. https://www.fidelity.com/learning-center/trading-investing/macro-outlook

Finke, M. S., Huston, S. J., & Winchester, D. D. (2011). Financial advice: Who pays. *Journal of Financial Counseling and Planning, 22*(1), 18-26.

Gill, A., & Bhattacharya, R. (2017). The interaction of financial attitudes and financial knowledge: Evidence for low-income Hispanic families. *Atlantic Economic Journal, 45*(4), 497–510. https://doi.org/10.1007/s11293-017-9556-4

Hanna, S. D. (2011). The demand for financial planning services. *Journal of Personal Finance 10*(1), 36–62.

Hyzy, C. (Host). (2022, May 9). More volatility ahead: Your key questions answered. [Audio podcast episode]. In *Merrill perspectives*. Merrill. https://www.ml.com/the-merrill-lynch-perspectives-podcast/more-volatility-ahead.html

Idzelis, C. (2022, May 17). *Odds of 'hard landing' jump as stock, bond investors worry about economic growth,* *says Morgan Stanley*. MarketWatch. https://www.marketwatch.com/story/odds-of-hard-landing-jump-as-stock-bond-investors-worry-about-economic-growth-says-morgan-stanley-11652742574

Kenny, D. A. (2021, May 4). *Mediation*. https://davidakenny.net/cm/mediate.htm

Kim, & Kim, J. (2010). Information search for retirement plans among financially distressed consumers. *Journal of Family and Economic Issues, 31*(1), 51–62. https://doi.org/10.1007/s10834-009-9179-2

Klebnikov, S. (2022, April 29). *Stock market selloff continues as investors worry about higher interest rates*. Forbes. https://www.forbes.com/sites/sergeiklebnikov/2022/08/29/dow-falls-200-points-market-selloff-continues-as-investors-worry-about-higher-interest-rates/?sh=400ea8571782

Kline, R. B. (2016). *Principles and practice of structural equation modeling* (4th ed.). The Guilford Press.

Kuhlthau, C. C., Heinström, J., & Todd, R. J. (2008). The 'information search process' revisited: Is the model still useful? *Information Research*, *13*(4), 13-4.

La Monica, P. (2022, Jul 20). *The CEO of Goldman Sachs is worried about a recession*. CNN Business. https://www.cnn.com/2022/07/20/investing/goldman-sachs-david-solomon-recession/index.html

Letkiewicz, J., Robinson, C., & Domian, D. (2016). Behavioral and wealth considerations for seeking professional financial planning help. *Financial Services Review, 25*(2), 105-126.

Lusardi, A., & Mitchell, O. S. (2007). Financial literacy and retirement preparedness: Evidence and implications for financial education. *Business economics*, *42*(1), 35-44. https://doi.org/10.2145/20070104

Lusardi, A., & Mitchell, O. S. (2017). How ordinary consumers make complex economic decisions: Financial literacy and retirement readiness. *The Quarterly Journal of Finance*, *7*(3), 1750008. https://doi.org/10.1142/S2010139217500082

Muthén, L. K., & Muthén, B. O. (2017). *Mplus* Users Guide. 8th ed. Los Angeles, CA: Muthén & Muthén.

Oney, E., & Oksuzoglu-Guven, G. (2015). Confidence: A critical review of the literature and an alternative perspective for general and specific self-confidence. *Psychological reports*, *116*(1), 149-163.

Preacher, K. J., & Hayes, A. F. (2004). SPSS and SAS procedures for estimating indirect effects in simple mediation models. *Behavior research methods, instruments, & computers*, *36*(4), 717-731.

Reinicke, C. (2022, May 10). *43% of investors say they're too nervous to get into markets right now. Here's why they should invest anyway*. CNBC. https://www.cnbc.com/2022/05/10/43percent-of-investors-say-theyre-too-nervous-to-get-into-markets-right-now.html

Rhine, S. L. W., & Toussaint-Comeau, M. (2002). Adult preferences for the delivery of personal finance information. *Journal of Financial Counseling and Planning, 13*(2), 11-26.

Robb, C. A., Babiarz, P., & Woodyard, A. (2012). The demand for financial professionals' advice: The role of financial knowledge, satisfaction, and confidence. *Financial Services Review, 21*(4), 291–305.

Rubio, A. R. (2013). Understanding minority households as consumers of financial services. *Family and Consumer Sciences Research Journal, 42*(2), 150-161.

Schwab. (n.d.). Should I worry about inflation? *Charles Schwab*. https://www.schwab.com/learn/story/should-i-worry-about-inflation

Shrout, P. E., & Bolger, N. (2002). Mediation in experimental and nonexperimental studies: New procedures and recommendations. *Psychological Methods, 7(4),* 422.

Simintiras, A. C., Yeniaras, V., Oney, E., & Bahia, T. K. (2014). Redefining Confidence for Consumer Behavior Research. *Psychology & Marketing*, *31*(6), 426–439. https://doi.org/10.1002/mar.20705

StataCorp. (2021). *Stata Statistical Software: Release 17*. College Station, TX: StataCorp LLC.

Stigler, G. J. (1961). The economics of information. *Journal of Political Economy*, *69*(3), 213-225.

Stajkovic, A. D. (2006). Development of a core confidence-higher order construct. *Journal of Applied Psychology, 91*(6), 1208-1224. https://doi.org/10.1037/0021-9010.91.6.1208

Stevenson, T. H. & Plath, D. A. (2002). Marketing financial services to the African American consumer: A comparative analysis of investment portfolio composition. *California Management Review, 44*(4), 39-64.

Wang, J., & Wang, X. (2012). *Structural Equation Modeling: Applications Using Mplus*, John Wiley & Sons.

Exploratory Examination of the Financial Knowledge and Socialization of Black College Students and Their Lived Experience of Personal Financial Management

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Abstract

Financial literacy and education have become hot topics in the U.S. The research of the Black community within this field of study is limited and existing findings are bleak. This study sought to understand the financial knowledge, behaviors, and socialization of Black college students and how they make meaning of their experiences of personal finance. Semi-structured interviews were conducted with a subset of eight respondents and these questions were crafted using Critical Race Theory (CRT) and explored the participants intersectionality of race and personal finance.

Keywords: college finance, financial education, financial literacy, critical race theory

Background

Examining financial literacy and financial education among Black college students today requires an analysis of our country's racialized history that systemically and politically created what is known as the racial wealth gap. More than a century has passed since freedom was claimed for Black Americans and over 50 years since the passing of the Civil Rights Act, which provided equal rights to Black people, and yet the struggle of equality continues. The wealth gap, also known as wealth inequality, is often referred to as the unequal distribution of assets among residents in the United States. A report in 2016 on the state of wealth in the Black community indicates that if current trends continue, "it will take the average Black family 228 years to reach the collective level of wealth of white families today" (Asante-Muhammed et al., 2017). Educating the next generation of leaders about personal financial management is becoming an essential topic of discussion, especially due to the fallout of the 2008 economic recession (Tschache, 2009). Hudson et al. (2017) advocates the importance of financial socialization to the Black community as there is a lack of formal financial education, which has affected the financial socialization of Black people.

Although it has been agreed upon that financial literacy is important for individuals to have, there is no consensus on its definition. "Many definitions in the literature are centered on themes of financial knowledge, satisfaction or well-being, confidence, and/or behavior" (Kasman et al., 2018). The definition of financial literacy used in this study is "an individual's ability to obtain, understand and evaluate the relevant information necessary to make decisions with an awareness of the likely financial consequences and involves making meaning within existing social structures" (Pinto & Coulson, 2011, p. 57). While there are often many different definitions of financial literacy, one thing that is agreed upon is that having a clear definition is essential for program creation and evaluation.
This study adds to the existing literature as there is no one study that seeks to understand both the internal (attitudes/behaviors) and external factors (institutional injustices, lack of financial education) that contribute to Black college students' financial knowledge, attitudes, behaviors, and socialization. This study aimed to understand the experience of the participants with money and financial management with qualitative inquiry to obtain a participant-centric understanding while minimizing biases.

Purpose

This study sought to understand the financial knowledge, behaviors, and socialization of Black college students. It explored how these factors relate and the intersectionality of race among the variables, and the participant's lived experience of these factors. The implications of the research presented has the potential to influence the financial outcomes of Black college students, methods of financial education delivered to this group, and the financial well-being of participants' descendents. College students were chosen as they have varying financial responsibilities and access to financial education resources and are just starting to make important financial choices.

Theoretical Framework

Critical Race Theory (CRT) was used to explore the meaning-making of participants' experiences with financial management. CRT is a theoretical framework based on the concept that racial inequality is a result of the differences created by White people to maintain their elite interests and essential dominance. Ladson-Billings and Tate (1995) believed that CRT should be a tool to examine race and its importance in education and reform, being the pioneers for the use of CRT in education. They believed that CRT was important to examine the inequalities within the education system and how it maintains white supremacy. This research aimed to shed light on the wealth gap, which is an issue that has long been plaguing the Black community, and to begin the conversation to change the world of this marginalized population and the nation at large. Utilizing CRT allowed for a deeper understanding of the meanings of the students' experience and interpret personal financial management through the lens of the participants aligning with the principle of storytelling. On the point of race being a social construct, this study acknowledges race and “the power of a social reality that allows for significant disparities in the life chances of people based on the categorical understanding of race” (Ladson-Billings, 2015, p. 39). Using CRT to explore the lived experiences of college students, there is an understanding that the social construction of race impacts the experiences of Black people and often leads to disparities in experiences and opportunities. This work converges on the two tenets of anti-essentialism and counternarratives, as essentialism is the belief that people of the same group are the same in thinking, behaviors, and beliefs (Ladson-Billings, 2015). The goal of the interviews was to explore the experiences and stories as told by the participants with the hopes of debunking many of the stereotypes and assumptions that all Black people see, think, and behave the same around financial management.

Research Questions

The following research questions were used to examine this study:

1. What is the current financial literacy among Black college students?
2. What are the financial behaviors of Black college students?
3. What is the financial socialization of Black college students?
4. Does perceived or subjective financial knowledge differ from Black college students’ objective financial knowledge?
5. How has race affected their perception, if at all?
6. How do Black college students make meaning of personal financial management?
7. How does race influence this meaning-making?

Methodology

The variables used in this study were based on existing literature. The variables and sample of research interview questions of interest are summarized below:

1. What were your first memories of money and its use?
2. What are your feelings about wealth and money?
3. What are your thoughts about wealth in your family? In the Black community?
4. Do you think there are any racial differences in wealth generation? Why or why not?
5. What are your thoughts about Black [women/men] and money? What has society taught you about Black [men/women] and money?
6. Have you noticed any gender or cultural differences in relation to wealth or money management? If so, please tell me about this situation or time.
7. Please share some of your current practices for managing money.
8. Have you had a time where you had to struggle with money?
9. When you think about saving money, what comes up for you?
10. What would you consider to be the most influential way you have learned about money management to date?
11. Do you believe it is important to learn about money management? Why or why not?
12. Financial wellbeing is a term that can be defined as a state of being where a person can current and financial obligations. With this definition in mind, on a scale of 1-10, 10 being the highest, how would you rate your financial wellbeing?
13. Have you taken a course in school and/or outside of school about money management?

Analysis

Analysis of the data was grounded in CRT while using interpretative phenomenological analysis (IPA). This phenomenological approach involves an examination of the participant’s life experiences and explores their perception of an object or event instead of a specific statement of the event or object (Smith & Osborn, 2008). Phenomenology studies allow for an understanding of both individual and collective experiences of the phenomenon of financial literacy (Henfield et al., 2013). To gain clarity around the financial literacy and lived experience of Black college students on these topics, the participants were involved to fully capture the nuances of the phenomenon to implement findings that can impact the communities of the participants (Creswell & Clark, 2017). IPA research methodology also aligns with the CRT as it endeavors to explore the effects of financial socialization and how it correlates to financial literacy within the Black community. This section challenged the existing dominant narratives that exist in many of the quantitative scales and sought to explore differences in the results by using culturally relevant questions for the interviews. It is grounded in CRT principles of anti-essentialism and counter-narrative.

It was essential to ensure questions were culturally relevant and acknowledged the historical context rooted in the institution of White supremacy (Ledesma & Calderon, 2015). The questions addressed how participants make meaning of financial knowledge, attitudes, behaviors, and socialization but do so in a way that ensures "cultural relevance to Black or African American adults" (Baity, 2020, p. 23). An example of these culturally relevant questions includes wording some questions asking about 'family role models' instead of parents noting that not everyone has grown up in a two-parent home but may have varying familial structures. The nuances in the wording of the questions were important because some normative scale questions might ask participants about behaviors not typical in Black Households. For example, allowances are typically included as a norm in most financial socialization scales. However, not all Black households provide allowances to dependents.

Interviews were transcribed in their entirety. Following the transcribed interviews, the first cycle process began with a thorough reading of the transcripts by the principal investigator. According to interpretative phenomenological analysis, once the interviews are fully transcribed and read, the researcher will take notes to identify comments of interest or highlight significant responses as it relates to participants' experiences of racial capitalism, financial socialization, and financial management and how all three are intertwined (Smith & Osborn, 2008). This initial coding process was conducted manually according to the Nvivo coding method, which is an inductive approach. This coding method was selected to fully capture the participants' voices (Saldana, 2006). In-Vivo coding "help us to preserve participants' meanings of their views and actions in the coding itself" (Saldana, 2006, p. 76). This process allowed the researcher to note any questions or points that may appear contradictory from other accounts of the participant by analyzing the responses of the participant.

After the initial reading of the first transcript, a second reading of the same transcript was done to allow the researcher to make note of emerging themes in the second margin. "Here the initial notes are transformed into concise phrases which aim to capture the essential quality of what was found in the text" (Smith & Osborn, 2007, p. 68). This process is also known as second cycle coding using the 'axial' stage, which groups the codes thematically as axial coding connects categories to subcategories (Miles, Huberman & Saldana, 2014; Saldana, 2006) to uncover emergent and emerging themes. Recurring themes from the initial read of the first transcript were listed in the order in which they occurred and then analyzed for potential connections. The process described above was repeated for analysis of all subsequent interview transcripts.

For the second cycle coding process, the constant comparative approach was used to compare themes across all interviews. The emergent themes from the first few participant transcripts were used to orient the coding of later transcripts, but attention was given to any new themes that emerged (Smith & Osborn, 2007). Once all transcripts were transcribed and coded, they were reviewed, and themes were merged to create a master list of four main categories of themes. Using this process allowed for the respecting of "convergences and divergences in the data – recognizing ways in which accounts from participants are similar but also different" (Smith & Osborn, 2007, p. 73). Because this is a phenomenological study, reviewing the convergence and divergence of the data was where the phenom became more evident. The main theme categories were organized by phenom.

Results and Discussion

The results were divided into four categories that include eight themes found during the inductive analysis of the data. The categories are 1.) perceptions of their financial knowledge, 2.) personal engagement in financial practices, 3.) participants' beliefs about money and wealth, and 4.) participants' perceptions of race and the acquisition of money and wealth. The transcripts were coded based on themes, and the themes were condensed into four overarching categories. The following are the themes associated with the categories. Support for these themes and categories are then discussed. The themes and their recurrence among participants are summarized in the attached table.

The main goal of the interviews was to explore the meaning-making of the personal finance of the participants. Therefore, their financial knowledge, behaviors, and socialization were also explored. Race, as related to meaning-making, was explored concerning the participants' perceptions of wealth and money management. Results showed that participants saw and felt that race affected wealth, often noting racial differences in perceived wealth.

Participants often recognized and exhibited an understanding of wealth and its importance. However, they lacked to acknowledge wealth as something within their reach in terms of attainment. The lack of representation could be why participants do not see wealth as something personally attainable, as many noted not seeing examples of wealth in their homes or communities. For example, Participant C stated that it almost feels intentional that Black people are represented as less than opposed to their White counterparts regarding wealth and other things. This statement alludes to the systematic injustices that keep the Black community from advancing, which is precisely how racial capitalism continues to inhibit progress toward true racial equity.

This study capitalizes on the importance of financial education and the desire for this information by college students. It also highlights that the curriculum needs to be culturally relevant for students to understand the concepts (Ladson-Billings, 2021). "Critical race theory sees the official school curriculum as a culturally specific artifact designed to maintain a White supremacist master script" (Ladson-Billings, 1998, p. 18). Participant C noted that "school itself is very strange in terms of like getting stuff curriculum wise because it always feels like it's very shallow and not many teachers get an opportunity to go in-depth about various topics." This observation should be considered when schools implement financial literacy mandates and develop curricula that will deviate from the existing curriculum to promote inclusion and equity. Educators must prioritize the importance of different learning styles, as it is the only way sustainable change will be accomplished (Capper, 2015). Research supports that a culturally responsive curriculum could increase the effectiveness of financial education (Hudson et al., 2017). Participants also noted interactive instructional methods as most effective for those socialized at school, which should be considered when thinking of instructional methods. Given the lack of research tools and financial curricula that is culturally responsive, this is a vast area of opportunity for educators and curriculum designers to implement.

In addition to implementation, interview participants noted several financial concepts that they would want to learn. The most mentioned financial concept that participants expressed wanting to learn more about was taxes. It was mentioned among five of the participants as an additional financial concept that they would want to learn. While most participants expressed some knowledge of investing, learning more about investing was the second most mentioned financial concept, with three (38%) out of the eight participants. Chen and Volpe (1998) also noted that students often have less experience and knowledge of investment topics. As a result, high schools should consider a curriculum that teaches some basics of financial management, including budgeting, investing, and credit (Mandell, 2008).

Of the participants, 25% wanted to learn more about the financial implications of obtaining housing. This included wanting to know about purchasing a home, as cited by Participants A and E, and securing an apartment, as mentioned by Participant F. Participant A expressed an interest in learning more about the loan process for purchasing a home, commenting: "I want to learn more about mortgages like purchasing houses." Additional topics ranged from learning more about budgeting to the banking system and understanding credit. These findings can inform community-based programs, such as Junior Achievement and public programs offered by local cities and community redevelopment agencies. It could also inform employer-based resources for employees that want to offer financial literacy training for their employees. There is a need for more community-based resources as most of the training provided by banks is geared toward selling their products or those looking to purchase homes, often excluding individuals looking to improve their financial situation.

Implications

Findings from this study can be used to inform researchers on the nuances and methods that Black college students are financially socialized, their financial knowledge level, and their financial behaviors. Participants acknowledge that there are several areas where additional knowledge of financial topics could exist. A better understanding of the lived experiences of the participants and how they make sense of wealth and money revealed that there is an awareness and strong desire to obtain both. However, when contextualizing race against their lived experiences, the possibility of obtaining wealth was often viewed as unobtainable. Researchers should include these findings to account for the experiences of Black college students in future research studies and measurement instruments. Future studies should be conducted to increase the sample size, along with follow-up interviews or observations to explore the lived experience of the participants further. Also, it would be useful to explore students in secondary education or older adults with varying educational attainment and backgrounds to see if that makes a difference in the reported financial knowledge. This is important as more life experiences could lead to better financial knowledge, and research supports that this knowledge often increases with the age of individuals (Chen & Volpe, 1998).

References

Alase, A. (2017). The interpretative phenomenological analysis (interpretative phenomenological analysis): A guide to a good qualitative research approach. *International Journal of Education and Literacy Studies*, *5*(2), 9–19. https://doi.org/10.7575/aiac.ijels.v.5n.2p.9

Asante-Muhammad, D., Collins, C., Hoxie, J., & Nieves, E. (2017). *The road to zero wealth*. Institute for Policy Studies. https://ips-dc.org/report-the-road-to-zero-wealth/

Baity, C. (2020). *Family Financial Socialization in Black Families: An Exploratory Study* [Doctoral Dissertation, Florida State University] ProQuest.

Capper, C. A. (2015). The 20th-year anniversary of critical race theory in education. *Educational Administration Quarterly, 51*(5), 791–833. https://doi.org/10.1177/0013161x15607616

Chen, H. and Volpe, R. P. (1998) An Analysis of Personal Financial Literacy among College Students. Financial Services Review, 7, 107-128. https://doi.org/10.1016/S1057-0810(99)80006-7

Creswell, J. W., & Clark, V.L.P (2017). *Designing and conducting mixed methods research* (3rd digital ed). SAGE Publications.

Dikko, M. (2016). Establishing construct validity and reliability: Pilot testing of a qualitative interview for research in Takaful (Islamic Insurance). *The Qualitative Report*, *21*(3), 521-528. https://nsuworks.nova.edu/tqr/vol21/iss3/6/

Hudson, C., Young, J., Anong, S., Hudson, E., & Davis, E. (2017). African American financial socialization. *The Review of Black Political Economy*, *44*, 285–302.

Kasman, M., Heuberger, B., & Hammond, R. (2018). *A Review of large-scale youth financial literacy education policies and programs*. The Brookings Institution.

Ladson-Billings, G. & Tate, W. (1995). Toward a critical race theory of education. *Teachers College Record*. *97*, 47-68. https://www.researchgate.net/publication/279676094_Toward_a_Critical_Race_Theory_of_Education

Ladson-Billings, G. (2015). Critical race theory—What it is not! In M. Lynn & A. Dixson (Eds.), *Handbook of Critical Race Theory in Education* (pp. 34–47). Routledge. https://doi.org/10.4324/9780203155721.ch3

Ladson-Billings, G. (2021). *Culturally relevant pedagogy: Asking a different question*. New York, NY: Teachers College Press

Ledesma, M. C., & Calderón, D. (2015). Critical race theory in education: A review of past literature and a look to the future. *Qualitative Inquiry*, *21*(3), 206–222. https://doi.org/10.1177/1077800414557825

Mandell, L. (2008). *The financial literacy of young American adults: Results of the 2008 national Jump$tart Coalition survey of high school seniors and college students*. Jump$tart Coalition. http://ml.smgww.org/assets/pdf/2008 JumpStart Financial Literacy Survey.pdf

Maxwell, J. A. (2013). *Qualitative research design: An interactive approach* (3rd ed.). SAGE.

National Center for Education Statistics, NCES (2015). *The Condition of Education 2015* (NCES 2015-144). U.S. Department of Education. https://nces.ed.gov/pubs2015/2015144.pdf

Pinto, L. & Coulson, E. (2011). Social justice and the gender politics of financial literacy education. *Journal of the Canadian Association for Curriculum Studies, 9*(2), 54–85. https://jcacs.journals.yorku.ca/index.php/jcacs/article/view/34299

Saldaña, J. (2006). *The coding manual for qualitative researchers*. SAGE.

Siedman, I. (2013). *Interviewing as qualitative research: A guide for researchers in education and the social sciences* (4th ed.). Teachers College Press.

Smith, J. A., & Osborn, M. (2008). Interpretative phenomenological analysis. In J. A. Smith (Ed.), *Qualitative psychology: a practical guide to research methods* (2nd ed., pp. 53–80). SAGE. https://doi.org/10.4135/9781848607927.n11

Tschache, C.A. (2009). *Importance of financial literacy and financial literacy content in curriculum* [Master's Thesis, Montana State University]. ScholarWorks. https://scholarworks.montana.edu/xmlui/bitstream/handle/1/2449/TschacheC0809.pdf?sequence=1

U.S. Census Bureau. (2017). *Race & ethnicity*. United States Census Bureau. Retrieved October 10, 2020, from https://www.census.gov/mso/www/training/pdf/race-ethnicity-onepager.pdf

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The Oldest Old's Experiences of Financial Fraud and Exploitation: An Exploratory Panel Study

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Abstract

Previous research has well-established the risk and protective factors contributing to older adults' experiences of financial fraud victimhood. Gaps remain, however, on the presence of these factors as experienced by the aged 85+ demographic. Even less research has explored the conceptualization of financial fraud as a tertiary outcome for older people—one in which exploitation occurs, almost occurs but is avoided, or never occurs. In this session, join MIT AgeLab researchers for a discussion about a mixed methods study with a panel of ages 85 and older adults exploring their experiences with financial fraud in the latest phase of life.

Keywords: age stereotypes, financial fraud, mixed methods, oldest old, technology

Background

Financial exploitation (FE) of older adults has emerged as one of the most common forms of elder abuse – one that can be difficult to detect and is likely vastly underreported (Deane, 2018; Sullivan-Wilson & Jackson, 2014). FE is not only prevalent but costly, with estimated annual losses ranging between $2.9 billion and $36.5 billion annually (Wood & Lichtenberg, 2017; CFPB, 2019). With roughly 10,000 Americans reaching the age of 65 each day and the number of individuals ages 85 also on a steep incline, elder FE is expected continue to increase in magnitude in coming years (Olivari, 2018). And, although many of the contributing factors and impacts of older adults' vulnerability to consumer fraud have been explored, there is still much to be learned about elder financial exploitation in an increasingly digital economy.

Adults ages 85 and over comprise one of the fastest-growing age demographics in the United States (U.S.) (Ortman et al, 2014). Current U.S. projections suggest the 85+ population will more than double from 6.4 million in 2016 to 14.6 million by 2040 (a 129% increase) (U.S. Dept. of Health and Human Services, 2018). Relative to other age cohorts, adults ages 85 and over contend with greater incidences of cognitive decline and social isolation and generally demonstrate lower levels of technological savviness (Donovan & Blazer, 2020; Vogels, 2019). However, certainly compared with previous cohorts of adults ages 85 and over, a growing number of "oldest old" adults use the internet, smartphones, and other mobile technologies (Anderson & Perrin, 2017; Miller et al., 2015; Vogels, 2019). With much of the existing research suggesting that a combination of factors renders adults ages 85 and over statistically at highest risk of falling victim to financial exploitation and fraud (DeLiema, 2018; Hafemeister, 2003), it is vital to understand the unique ways in which this "oldest old" age demographic experience fraud and scams.

Researchers at the Massachusetts Institute of Technology AgeLab seek to understand experiences of, and attitudes toward, financial exploitation of older adults by learning from a key age group: adults ages 85 and older (Ortman, Velkoff, & Hogan, 2014). Specifically, this paper explores the ways in which adults ages 85 and over encounter, experience and perceive consumer fraud. Rather than simply treating exploitation as a dichotomous variable – that is, either having experienced financial fraud or not– people can be considered as those who have experience fraud directly, those who have come close to experiencing fraud themselves, and those who report having had no personal experience with fraud. Such an approach may help to illuminate the ways in which various factors align to enable or prevent acts of consumer fraud perpetrated against the 85+.

Financial exploitation among the "oldest old:" Risk and protective factors

Among the first commonly-cited risk factors for FE found in the literature is social isolation and loneliness (Norris et al., 2019; FINRA, 2019). The Centers for Disease Control and Prevention [CDC] reports older adults are at a higher risk for loneliness, as they typically face an increased chance of having family and/or friends who have passed away, may live alone, and/or are experiencing hearing loss (CDC, 2021). Relative to 'younger' older adults, people ages 85 and older are at particular risk for social isolation and loneliness (Graneheim & Lundman, 2010) in these respects.

Another frequently-cited risk factor for FE is cognitive impairment (Deane, 2018; Peterson et al., 2014). Cognitive impairment has been frequently linked to issues with financial management and greater risk of fraud victimhood (CDC, 2015; Han et al., 2016). Similar to the risks of social isolation, adults ages 85 and older are at highest risk for experiencing cognitive impairment relative to younger cohorts (Bullain & Corrada, 2013; Kawas et al., 2021). As a result, memory loss and cognitive decline may render adults ages 85 and older particularly vulnerable to FE. Trust is a third risk factor for FE among the 85+ population. Existing literature suggests older adults are vulnerable to FE due to a higher degree of trust in others, especially towards strangers (Castle et al., 2012; Shao et al., 2019). Adults ages 85 and older may be particularly susceptible to FE vis a vis trust in that they typically exhibit the highest levels of trust in others (Li & Fung, 2013).

Finally, generally low levels of technology savviness have been found to increase one's vulnerability to FE (Morgan et al., 2019). Previous studies comparing older adults to those who fit into the "oldest old" population have found sizable differences when it comes to technology adoption, such that individuals from the 65-69 year old age group are twice as likely to be online and four times as likely to own a smartphone compared to the 85+ (Anderson & Perrin, 2017). While the older adult population in general exhibits high degrees of technology savviness compared with previous cohorts of older adults (Vogels, 2019), members of the "oldest old" population with low levels of experience with technology may be at greater at risk for digital financial fraud (OECD, 2018).

Despite the unique risk profile for FE that adults ages 85 and older may possess, previous research suggests other characteristics may be protective against older adults' victimization to FE in general (and thus be particularly important to understand for the 85+). These characteristics include greater life experience (Ross et. al., 2014), number of people in one's social network (Wood, 2017), and the presence of social support (Liu et al., 2017; Wood, 2017). Additional factors such as being more risk averse and having a finer prospective memory in everyday life (e.g. to remember and perform future daily tasks) have also been shown to inherently safeguard older adults from FE (Ross et al., 2014).

After a financially exploitative experience, older adults may take actionable steps to protect themselves in the future. The literature explains that after becoming a victim of fraud, older people may engage in some of the following behaviors: limiting use of credit card, reporting to law enforcement, no longer purchasing items off the internet, providing no identifying information, and having an increased awareness of fraud opportunities (Button et al., 2014; U.S. Department of Justice, 2020). Research also suggests individuals may choose to not disclose their victimization experience for a variety of reasons, including but not limited to, embarrassment (Gibson, 2013). Some prior research has explored the emotional effects of FE on the older adult's sense of self-confidence and self-esteem, including through highlighting society's contributions to the stigma and taboo related to both aging and financial fraud (see O'Brien et al., 2011; Phelan, 2008; Podnieks, 2006). The literature does not, however, explicitly investigate the extent to which these factors and characteristics are explicitly present in the financial fraud experiences of those aged 85 and older.

Purpose

The overall aim of this study is to understand how a panel of U.S. adults ages 85 and over perceive and experience financial fraud, scams, and exploitation in later life.

Hypotheses or Research Questions

In line with the cross-sectional, mixed methods design employed for this study, our research aimed to discover rather than validate and/or reject hypotheses (Bronstein & Kovacs, 2013). In examining these questions, our research seeks to identify actionable research and practice implications for professionals who may be interacting with the 85+, other kinds of older adults, and those who care for them. Building on previous research, the research questions guiding our study include:

- Question 1: *What do adults ages 85 and over perceive as risk and protective factors associated with their actual or potential experience(s) being targets of financial fraud?* Distinct from previous literature – an abundance of which has focused on financial exploitation from the perspective of scholars and practitioners – significantly less research has centered the voices of older adults, and even less so among the "oldest old" population, in particular, on this topic. Acknowledging these limitations, this study is particularly interested in elevating the attitudes and opinions of 85+ year old adults, themselves. Challenging the somewhat-ubiquitous narrative of older adults as helpless or without resources, we were interested in examining the factors our sample of the 85+ identify and the extent to which these dynamics are reflected the current literature on this topic.
- Question 2: *To what extent do the factors identified contribute to an 85+ year old's propensity to be successfully versus unsuccessfully exploited by consumer fraud? In other words, how do successful and*

unsuccessful "near miss" cases differ from those who have never encountered financial exploitation? Virtually all existing research about FE focuses on experiences of those who have been victimized. While understanding these experiences is important, it may be just as important for future research and practice to understand the perspectives of those who describe narrowly or completely avoiding FE.

- Question 3: *How do adults ages 85 and over describe the role of stigma, taboo, shame, or embarrassment in their experience(s) with financial exploitation?* Further, thinking about their own attitudes and actions as well as the attitudes and actions of loved ones, perpetrators, professionals, and society, to what extent do adults ages 85 and over discuss ageism in light of their experiences with FE?

Methodology

This research utilized a mixed methods design triangulating data from five focus groups and from an online questionnaire in order to capture breadth in measurable outcomes through quantitative means and depth through qualitative responses (Bronstein & Kovacs, 2013). Mixed methods research offers benefits to researchers exploring understudied topics, as with financial exploitation among the "oldest old" (Brancale & Blomberg, 2019). Synthesizing quantitative and qualitative data further strengthens confidence in findings while also offering greater flexibility and accessibility in engaging in research with members of the 85+ age demographic. The study was approved by the Committee on the Use of Humans as Experimental Subjects (COUHES) at the Massachusetts Institute of Technology (MIT).

Since 2015, the MIT AgeLab has convened a bimonthly research panel of adults from the greater Boston area ages 85 and older called the MIT AgeLab 85+ Lifestyle Leaders Panel. With the onset of the COVID-19 pandemic, the panel moved online and began to recruit nationally. Panelists are recruited primarily through snowball sampling through word-of-mouth and by way of outreach talks given by MIT AgeLab researchers to local organizations. As a result, this panel is certainly not representative of all adults ages 85 and over in the United States, but it does offer insight into an older demographic contending with the challenges of advanced older age, including those who are generally healthy, active, and have some degree of technological savviness.

All 75 members of the 85+ Lifestyle Leaders Panel who regularly receive communications about the panel were invited to participate in the online focus groups and questionnaire. Participants were also offered the Consumer Financial Protection Bureau's June 2021 *Money Smart for Older Adults Resource Guide* and a link to AARP's *Money, Scams and Fraud* online resource ahead of the session to ensure they would be familiar with the nature of the workshop content, and to provide additional resources for any who might benefit from them.

Approximately 32 of 75 Lifestyle Leaders completed an 80-item questionnaire about their attitudes and experiences regarding fraud, scams, and financial exploitation; 28 completed the questionnaire online via the Qualtrics platform and 4 by telephone with a researcher. All questionnaires were completed within an average of 32 minutes. Questionnaire participants ranged from 86 to 97 years of age ($\bar{x}$=90.01), had incomes from \$20,000 to \$250,000+ annually, and generally lived alone (60%, n=15). Participants' gender identities were split as 46% (n=11) identified as women, 50% as men (n=12), and 4.2% self-identified (n=1). To measure self-reported experiences with financial fraud, the questionnaire and focus group RSVP form both asked participants if they had experienced, had come close to experiencing or had not experienced financial exploitation within the past 5 years. The five-year time frame was selected in order to better identify and isolate the Lifestyle Leaders' more recent experiences with financial fraud in advanced older age. The questionnaire also included original items like self-rated cognitive health (e.g., (1) poor, (2) fair, (3) good, (4) very good, (5) excellent), loneliness (e.g., (1) not at all lonely, (2) slightly lonely, (3) somewhat lonely, (4) very lonely, (5) extremely lonely), and perceived level of experience with technology (e.g., (1) not experienced at all, (2) a little experienced, (3) somewhat experienced, (4) quite experienced, (5) very experienced) as well as adaptations of existing instruments like the General Trust Scale in which participants rate their agreement with a series of statements about the trustworthiness of other people (Yamagishi & Yamagishi, 1994).

A total of 18 participants attended a 90-minute meeting online via the Zoom platform. The session began with a brief presentation by MIT AgeLab researchers about financial exploitation and older adults, followed by 45 minutes of focus groups. Focus group participant demographics closely mirrored that of questionnaire respondents (e.g., 10 men (55%) and 8 women (44%)). Groups were formed based on the same original item from the questionnaire and RSVP form in which participants are asked if they have been, were almost or have not been a victim of financial fraud sometime within the past five years. This approach allowed focus group facilitators to develop relevant questions and probes in real time to uncover the unique characteristics of each participant's experience within the bounds of this three-part conceptualization of financial fraud victimhood (Roller & Lavrakas, 2015). Focus groups were moderated by MIT AgeLab researchers and semi-structured according to the type of group. All focus group guides addressed (1) the extent to which technology interacts with how they experience or engage with scams, fraud or financial exploitation (FE); (2) role age plays in targeting and exposing people to FE versus the role it plays in actual victimization; (3) perceived risk and protective factors of FE victimhood; (4) stigma attached to FE victimization; and (5) the role of others we trust in preventing and responding to FE. Unique to each group were also prompts centered specifically around what participants in each group believed contributed to their avoidance of or victimization to financial fraud.

Focus groups were audio and video-recorded. Audio recordings were transcribed by a human transcription service. Thematic analysis, "systematically identifying, organizing, and offering insight into patterns of meaning (themes) across a data set," was used with the transcripts (Braun & Clarke, 2012, p. 57; see also Lester, Cho, and Lochmiller, 2020). Questionnaire data collected via Qualtrics were cleaned and analyzed in SPSS Version 26.0. Due to the nature and size of the study sample, statistical analyses were kept largely descriptive in nature. These exploratory data develop our understanding of potential emerging patterns, associations and underlying mechanisms contributing to participants' experiences. Survey responses were triangulated with data from the focus groups.

Results

Exposure to Financial Fraud at 85+

Receiving financially fraudulent or exploitative correspondence was a commonly reported experience among Lifestyle Leaders. The largest proportion of panelists encountered scam-like correspondence six to ten times a month (35%, n=10). This occurred the most often through e-mail (56%, n=18) and landline (63%, n=20) or mobile phone (53%, n=17) calls. About a third (31%, n=10) reported encountering this kind of content through text messages, and just over a fifth reported receiving fraudulent or scam-like content via postal mail (22%, n=7).

In these data, our dependent variable of interest, experience with financial fraud victimization in the last five years, is distinguished by three categories of experience: those identified as having been a victim, those identified as having almost been a victim, and those who have never been a victim. Table 1 displays the distribution of respondents' responses to this question. The majority of Lifestyle Leaders in focus groups reported not experiencing FE, while in our confidential pre-group questionnaire, more Lifestyle Leaders reported they had almost been or were victims of FE. The majority of all Lifestyle Leaders (77%, n=23) reported knowing someone else who had been a victim of financial fraud or a scam.

Perceived Risk Factors for Victimization

The Lifestyle Leaders were asked why they have been targeted for financial fraud and the risk factors they felt contributed to their victimization at ages 85+, if victimization was close to occurring or had occurred. Four primary themes emerged from the data: cognitive decline; lack of knowledge and misplaced trust; technology use; and people's stereotypes of older adults.

Cognitive Decline

In the questionnaire data, 'almost victims' scored squarely in between 'have been' and 'have never been' victims with regard to average self-reported cognitive health; 'have been' victims had the lowest average self-reported cognitive health among the three groups. However, Lifestyle Leaders with worse reported cognitive health were not any more likely than those with better cognitive health to indicate greater levels of worry about becoming a victim of financial fraud in the future. In focus groups, Lifestyle Leaders expressed a general concern that cognitive decline could increase one's likelihood of becoming a victim of FE in the future. This was often discussed in a depersonalized manner. For example, a Lifestyle Leader mentioned, "Some people's mental ability declines, and they may, 10 years previously, have recognized that this [financially fraudulent content] is obviously not a true-life situation, and now at the age of 85 or 90, they've lost some of their mental acuity and can't evaluate that situation." Cognitive decline was perceived as a risk factor for other 'older adults' but not for the Lifestyle Leaders themselves.

A Lack of Knowledge and Misplaced Trust

Many Lifestyle Leaders described their experiences with financial fraud as ones that involved an element of "a lack of knowledge," "ignorance," or "misplaced trust." A lack of knowledge or ignorance was often referred to in the context of lacking specific information or knowledge about the nature of or a type of scam circulating. One Lifestyle Leader wrote in their questionnaire, "I was taken in by a bogus email looking like it was from Comcast. I fell for what I later learned was a "phish"…" Another described in a focus group, "I fell for a program that looked like it was going to help me with a problem I had with having way too much stuff [on my computer]…I asked the question, is there some way to [get] help [with this]? And lo and behold, this program came out, and I began talking to one of these people, and they sucked me right in."

This concept of lacking knowledge was often paired with comments about misplaced trust, including Lifestyle Leaders mistaking the perpetrator for someone they knew and could depend on. For example, someone described, "I had this one experience in which I assumed that the person with whom I was dealing was the person that I knew, and that was not the case. But because of my sympathy toward the individual who was having a problem, I immediately did something I should not have done…" Lifestyle Leaders in the questionnaire reported higher levels of worry about being taken advantage of financially by someone they did not know compared to worry about being taken advantage of by someone whom they did know. Average scores for overall trust in others were the highest among those who had never been victims of FE and lowest among those who had been victimized.

Technology

The contribution of factors like a lack of knowledge and misplaced trust in FE victimization cannot be untangled from the influence of technology. The Lifestyle Leaders discussed technology as a subject area in which many of them, as digital nonnatives, have gaps in understanding of and thus makes them easy prey for related scam content. Lifestyle Leaders who have never been FE victims reported the highest levels of experience with technology compared to the 'almost' and 'have been' FE victims. Among those who said they had almost been or had been defrauded in the questionnaire, 25% (n=8) said the scam or fraud had been related to an online purchase and 22% (n=7) said it was related to technology help or troubleshooting support. In focus groups, victimized Lifestyle Leaders also frequently described having experienced scams in relation to these two topics. As someone explained, "I was trying to research a problem I had where I had ordered an iPad cover. And this guy was talking about some iPad that someone had ordered, so I thought they were talking about the same order I had… I got to talking to these people and he said he was from Amazon. He was not, of course. He tried to keep me on the phone a long time…"

In the questionnaire, 52% (n=14) of respondents 'strongly agreed' with the statement, "Financial scams, fraud and exploitation are becoming more commonplace nowadays." In focus groups, panelists also noted technology use was a perceived risk factor associated with scam victimhood because technology has enabled more frequent exposure to financially exploitative content. One Lifestyle Leader stated, "I would say the technology from wherever… has enabled [fraud perpetrators or scammers] to mass, to contact millions of people at the same time with the robocalls…I'd say technology makes it so easy for them to do this…" Another elaborated, "Yes, [I think] there's been a change in the frequency by which everybody gets scams. Why? Because the technology has improved so that the cost of scamming is nearly zero these days."

Stereotypes of Older Adults

For the majority of Lifestyle Leaders, older age was not inherently linked to perceived frequency of exposure to FE. For example, a Lifestyle Leader in a focus group commented, "I've had many, many different calls and different texts about different scams. And it seems like it's not just for me because I'm older; I think it's widespread…my son, who is 60, is also bombarded with these scams." Additionally, a majority (52%, n=14) of Lifestyle Leaders strongly disagreed with the statement that "Compared to others my age, I feel more susceptible to being a victim of a financial scam, fraud, exploitation or another form of financial abuse," such that age alone was not perceived as a risk factor for susceptibility to FE.

Instead, Lifestyle Leaders noted stereotypes other people have about age and older adults may play a greater role in FE perpetration (see themes in Table 2). As one participant explained, "None of my children or grandchildren have spoken about being the target of scams. So, my feeling is it's the older people [scammers] go after, and they maybe decided the younger people are much smarter and will be able to fend them off easier. Lifestyle Leaders mentioned older people are viewed by others as ill-informed, ignorant, too trusting, or easy to confuse; for example, one Lifestyle Leader commented, "I think older people may be considered more easy to fool." The theme of older people as being seen as sick, vulnerable or lonely (and therefore become easier targets) was also stated. One Lifestyle Leader wrote, “Isolation, loneliness create vulnerability to telephone fraud through a greater willingness to speak to strangers.” “Older people [are at greater risk of being targeted] because they tend to have more difficulty hearing and maybe move more slowly, [and thus] may give the impression to some that they are not thinking as well and [are] easier to take advantage of,” mentioned another Lifestyle Leader.

Perceived Protective Factors Against Victimization
Focus groups and survey responses revealed complexity in the Lifestyle Leaders’ perceptions of two main protective factors against fraud victimization.

A Lifetime of Knowledge and Strategies for Prevention
In discussing a lack of knowledge as a risk factor, Lifestyle Leaders also expressed the inverse - having prior knowledge or awareness of a scam could be protective against future victimhood (e.g., “I used to go on [a neighborhood-based social media site called] Nextdoor a few times a week. And things started popping up there: people warning one another about emails they’ve gotten, or phone calls they’ve gotten. I learned about the IRS scam from there.”). Gaps in Lifestyle Leaders’ understanding about how to protect themselves exist - the greatest proportion of participants felt ‘extremely’ or ‘very’ knowledgeable about how to protect themselves from being financially scammed by strangers (31%, n=8), but 44% (n=12) reported feeling only ‘somewhat’ knowledgeable about how to protect themselves from being scammed by those they may know. As a result, several Lifestyle Leaders recommended sharing knowledge about FE should explicitly detail the nature of the fraud, scam or exploitation, an example scenario of how it occurs and ways to protect oneself from becoming a victim: *“*I’ve heard about grandparent schemes for at least four years. I have never heard or seen anything written for people who have fallen prey to this and how to handle it right from the start., what to do from the get-go so you don’t get caught up in the emotion of it [the scam].”

However, the Lifestyle Leaders also described that by age 85+, they had experienced a lifetime’s worth of exposure to financial fraud and scams, which in turn can be protective against victimization. One person noted, “I’ve had scam attempts for a long time…Scams are a part of life. Period.” Another commented, “Scams are a part of life. I think the best protection against a scam is just be careful. When I cross the street, I look both ways. And if something doesn’t smell right, I look and if it’s something I don’t know…I dump it... And there’s no such thing as a free lunch.”

Figure 1 displays the most common strategies Lifestyle Leaders reported taking against potential FE, including not responding to e-mails when they do not know who they are from (85%, n=23) and not answering the phone when they do not know the number or when they are not expecting a phone call (74%, n=20). Open-ended survey responses from panelists mention practices like engaging in charge verification with their bank or credit card company and avoiding use of social media. Lifestyle Leaders who had ‘almost been victims’ reported the highest average number of measures they had taken to protect themselves from financial fraud ($\bar{x}$= 3.4), followed by the ‘have been a victim’ ($\bar{x}$=3) and then the ‘have never been a victim’ groups ($\bar{x}$=2.3).

Disclosure to Personal and Professional Networks
In our questionnaire, the majority (55%, n=11) of Lifestyle Leaders who were almost or had been victims of financial fraud reported that no one had attempted to intervene when they were experiencing the exploitation. A participant who had been a recent victim of FE explained, “You don’t know really where to turn to get some effective, non-judgmental help.” Another stated, “old people like me do hesitate to share embarrassing incidents [like falling for a financial scam] and get help.” Comments about why financial fraud perpetrated against older adults is a challenging or taboo topic to discuss with others drew frank responses. One noted that fraud and FE “[point] out inequality and lack of support for older people in our country.” Another explained, “We’d like to think that older people should know better than to fall for scams and frauds or they get some protection within the family, and it takes a LONG time to get over the social stigma of being a victim.” More often than not, participants explained that a fear of seeming helpless, feeble-minded, or with poor judgement influenced their decision to not share their victim status with others. One Lifestyle Leader admitted, “I think as we get older and more infirmed, we just as soon [prefer] not [to] have everybody know all of our aches and pains, and one of our big aches and pains was the fact that we were scammed, and we certainly did not go around talking about it. It took me a couple of years to even mention it to anybody.”

In focus groups and open-ended survey responses, having relationships that were perceived as trustworthy in general and having relationships with younger people adept at technology were both identified as protective factors in preventing victimization to financial scams. One Lifestyle Leader who had never been a victim of financial fraud wrote that being able to "ask people I trust for financial advice" was the primary factor influencing why they felt they had not yet become a victim. When asked about the role her family and wider social network could have played in helping her to cope with her experience of financial fraud, a Lifestyle Leader noted, "…when someone has a problem, you don't accuse them of being a victim, you sympathize. You say, you put yourself in their shoes, and say, "this could happen to me, too. I'm so sorry for your loss," you know?" In considering intergenerational relationships, a Lifestyle Leader in a focus group commented, "The younger ones are more aware of the technologies that can mess you up [and expose you to scams], so they can be helpful. Cross your fingers that they're on your side."

In the questionnaire, all Lifestyle Leaders were asked who they have conversations in general with about financial scams or fraud. Participants were also asked if they were to become a victim of a financial scam or fraud in the future, how willing they would be to disclose their experience to the same cadre of people. Figure 2 displays who the Lifestyle Leaders most frequently reported having these conversations with compared to who they reported being 'very willing' to disclose an experience of financial fraud to if they were to become victimized in the future. The majority of Lifestyle Leaders reported that they had spoken with adult children (66%, n=21). Participants reported having had these kinds of discussions the least with healthcare professionals (6%, n=2), community-based organizations (6%, n=2), and lawyers (3%, n=1). If they were to experience financial fraud, the Lifestyle Leaders reported high willingness to disclose these experiences to many more types of people than they currently speak with.

Discussion

Findings from this study reveal our sample of 85-year-olds have had extensive experiences with financial fraud and scams, especially scams that are and contain technology-related content. Our study collected rich, nuanced data underscoring the importance of understanding from the panelists' perspectives their self-perceived risk and protective factors for financial fraud and exploitation; many factors identified by our participants were in alignment with previous literature (e.g., concern about cognition, the role of technology savviness). Each Lifestyle Leader's story of an encounter with financial fraud described a complex ecosystem of interconnected and layered factors that ultimately contributed to the outcome they had experienced. Not every factor we discovered had to have been present for a successful scam or avoidance of one, but the possibility that a preponderance of them or a certain combination of interactions between them became even more evident. These findings underscore the importance of not only examining risk and protective factors for financial fraud on their own, but in how they work together to contribute towards victimization.

Often, our participants who identified as 'almost victims' frequently scored in the middle of our questionnaire measures when compared to the other two victimization groups, indicating there is continued value in exploring what contributes to "near-miss" financial fraud cases and in further refining how we capture these experiences. The opportunity to expand our current reporting of how people experience FE can offer authorities more and better information about who is affected by FE and how.

This study also provides new insights about the role of stigma and shame in Lifestyle Leaders' experiences being targeted for FE. In line with research about victims' disclosure patterns regarding other types of exploitative experiences, it became clear through our study that having discussions about experiencing fraud and scams in older adulthood may be associated with its own difficulties – initially overcoming the stigma to speak about it while also deciding how and with whom to have these conversations, especially as one's social network composition and size changes and shift in the latest phase of older adulthood (Boulton et. al., 2017; Sylaska & Edwards, 2015; Alaggia, 2005). Willingness to share experiences with fraud may change for some of our panelists over time, and may be related to their abilities to place their experiences into a broader context around fraud victimization, as many of our Lifestyle Leaders reported low conversations with others and minimal experiences with others intervening on their behalf around financial fraud.

In our panel's case, participants who were and had almost been victimized were less confident that they would be exempt from experiencing financial fraud in the future. In alignment, with previous work on financial fraud re-victimization (see Karp & Kirkman, 2016; Deem & Lande, 2018; Irvin-Erickson & Ricks, 2019), similar to training an immune system to recognize a new or foreign virus, a near-miss experience may have inoculated some of our participants against future victimization and encouraged them to adopt more hypervigilant behaviors that could protect them from experiencing future financial fraud. The 85+ may need to be particularly vigilant about lacking knowledge or about specific issues like being scammed by someone they may know. Further examination of the protective effect of education and knowledge and previous exposure to (and in our panel's case a lifetime's worth of knowledge about and interactions with) financial scams and fraud is needed.

The Lifestyle Leaders' experiences with financial fraud suggest touchpoints where financial counseling and planning solutions have opportunities to intervene to prevent, stop and even help those impacted cope with financial fraud and scams including:

- **Using financial service networks and media platforms to raise awareness about age-related financial fraud, scams, and exploitation among older adults and those who care for them.** Results emphasize the importance of raising awareness and educating older adults about the types and warning signs of victimhood and pathways to respond when FE occurs. Lifestyle Leaders noted this information should be widely available, specific and timely so consumers can be fully informed. Doing so may also contribute to destigmatizing this topic and making it less taboo in general. Multiple Lifestyle Leaders described a hope to have more training and information available to the public about the scope of financial fraud, ways of preventing these acts from occurring, and information about how to seek support for those who have been exploited.
- **Create financial psychoeducational resources for people of all ages.** National data point to enduringly disparate levels of literacy regarding financial knowledge and financial management, including when it comes to the management of finances online and use of fintech, across all ages (Contreras & Bendix, 2021). The pace of technological development and increasing digitization of financial tools has meant especially for the relatively technology-savvy Lifestyle Leaders, there are new and greater challenges around discerning and responding to digital financial fraud. Combined with this data, our findings suggest that there is a need for financial psychoeducational resources for people of all ages, including those ages 85 and over (that is, resources that provide education and psychosocial support). People of all ages can benefit from resources that a) promote knowledge of protecting oneself from financial exploitation, especially that which is technology-enabled; b) increase financial literacy as applied to changing needs across the life course; c) explain legal protections and other resources people can leverage if they have been victimized and d) promote multigenerational conversations within families about FE experiences.
- **Promote financial counselors and hyperlocal resources for trusted information and support.** A broad sense of disillusionment with large companies and government response to financial exploitation emerged in our study. Thus, highlighting an opportunity for individual financial planners, financial counselors, bank tellers, and other more people-focused financial service associates to have conversations and provide resources to their clients to fill this gap. Our data also suggested the Lifestyle Leaders were having discussions about financial fraud with a minimal number of trusted stakeholders, but expressed high willingness to disclose their experience to a number of other stakeholders if they were to become victimized in the future. With low trust in large companies and the federal government to meaningfully respond to threats and incidences of fraud, but perhaps higher confidence in interpersonal contact and relationships, we can look to these personal relationships might have with their financial planner for education and support for FE, including:
  Community-based bystander intervention supports. Multiple Lifestyle Leaders indirectly spoke to the critical role of bystander intervention in preventing financial fraud. This supports the work of previous scholars who have previously applied the professional bystander intervention model to elder financial abuse (Gilhooly et al., 2016 & 2013). Similar to health promotion programs that have been piloted in barbershops (Palmer et al., 2020), professionals in a variety of community-based settings including all entities of the financial service network (e.g., bank tellers, receptionists, financial planners, etc.) could potentially yield notable advancements in preventing and responding to FE among older adults.
  Neighborhood-based social media. Previous research has demonstrated that people tend to have more trust in smaller, local, entities (O'Leary et al., 2021; Gao, 2016). To this effect, another potential implication of this research could involve leveraging the benefits of technology to promote trusted, hyperlocal, neighborhood-based connections to combat and cope with information and knowledge about financial fraud. These neighborhood-based social media platforms serves as a venue for where financial counselors can provide expert advice as well as stay informed about the types of scams and fraud circulating in their communities.

These implications represent just a handful of possible actions that financial counsel and planning services can take to especially protect adults ages 85 and over from experiencing financial fraud or scams and to support those who have been affected by FE.

References

Alaggia, R. (2005). Disclosing the Trauma of Child Sexual Abuse: A Gender Analysis. *Journal of Loss and Trauma, 10*(5), 453–470. https://doi.org/10.1080/15325020500193895

Anderson M., & Perrin A. (2017). *Tech Adoption Climbs Among Older Adults*. Pew Research

http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.911.7463&rep=rep1&type=pdf

Bullain, S. S., & Corrada, M. M. (2013). Dementia in the oldest old. *Continuum (Minneapolis, Minn.)*, *19*(2 Dementia), 457–469. https://doi.org/10.1212/01.CON.0000429172.27815.3f

Button, M., Lewis, C., & Tapley, J. (2014). Not a victimless crime: The impact of fraud on individual victims and their families. *Security Journal, 27*(1), 36-54. http://dx.doi.org/10.1057/sj.2012.11

Castle, E., Eisenberger, N. I., Seeman, T. E., Moons, W. G., Boggero, I. A., Grinblatt, M. S., & Taylor, S. E. (2012). Neural and behavioral bases of age differences in perceptions of trust. *Proceedings of the National Academy of Sciences of the United States of America*, *109*(51), 20848–20852. https://doi.org/10.1073/pnas.1218518109

Centers for Disease Control and Prevention. (2021, April 29). Loneliness and social isolation linked to serious health conditions. Centers for Disease Control and Prevention. Retrieved January 20, 2022, from https://www.cdc.gov/aging/publications/features/lonely-older-adults.html

Contreras, O. & Bendix, J. (2021). Financial literacy in the United States. Milken Institute. https://milkeninstitute.org/sites/default/files/2021-08/Financial%20Literacy%20in%20the%20United%20States.pdf

Cross, C. (2016). 'They're very lonely': Understanding the Fraud Victimisation of Seniors. *International Journal for Crime, Justice and Social Democracy, 5*(4), 60-75. DOI: 10.5204/ijcjsd.v5i4.268.

D'Ambrosio, M. (2020, June). *Prepared Testimony on "COVID-19 Fraud: Law Enforcement's Response to Those Exploiting the Pandemic."* Committee on the Judiciary. https://www.judiciary.senate.gov/imo/media/doc/D'Ambrosio%20Testimony.pdf

Deane, S. (2018). *Elder Financial Exploitation: Why it is a Concern, What Regulators Are Doing About it, and Looking Ahead.* U.S. Securities and Exchange Commission Office of the Investor Advocate. https://www.sec.gov/files/elder-financial-exploitation.pdf

Deem, D., & Lande, E. S. (2018). Transnational scam predators and older adult victims: Contributing characteristics of chronic victims and developing an effective response. *US Att'ys Bull.*, *66*, 177.

DeLiema M. (2018). Elder Fraud and Financial Exploitation: Application of Routine Activity Theory. *The Gerontologist, 58*(4), 706–718. https://doi.org/10.1093/geront/gnw258

Donovan, N. J., & Blazer, D. (2020). Social Isolation and Loneliness in Older Adults: Review and Commentary of a National Academies Report. *The American Journal of Geriatric Psychiatry: Official Journal of the American Association for Geriatric Psychiatry*, *28*(12), 1233–1244. https://doi.org/10.1016/j.jagp.2020.08.005

Financial Fraud Crimes. (2020, February 5). The United State's Attorney Office District of Alaska. January 14, 2022 from https://www.justice.gov/usao-ak/financial-fraud-crimes

Gao, G. (2016, April). Americans Divided on How Much They Trust Their Neighbors. Pew Research Center. https://www.pewresearch.org/fact-tank/2016/04/13/americans-divided-on-how-much-they-trust-their-neighbors/

Gibson, S. C. (2013). *Understanding underreporting of elder financial abuse: Can data support the assumptions?*. University of Colorado at Colorado Springs.

Gilhooly, M.L.M., Cairns, D., Davies, M., Harries, P., Gilhooly, K.J. and Notley, E. (2013). Framing the detection of financial elder abuse as bystander intervention: decision cues, pathways to detection and barriers to action. *The Journal of Adult Protection, 15*(2), 54-68. https://doi.org/10.1108/14668201311313578

Gilhooly, M.M., Dalley, G., Gilhooly, K.J., Sullivan, M.P., Harries, P., Levi, M., Kinnear, D.C., & Davies, M.S. (2016). Financial Elder Abuse Through the Lens of the Bystander Intervention Model, *Public Policy & Aging Report*, Volume 26, Issue 1, Pages 5–11, https://doi.org/10.1093/ppar/prv028

Graneheim, U. H., & Lundman, B. (2010). Experiences of loneliness among the very old: The Umeå 85+ project. *Aging & Mental Health*, *14*(4), 433–438. https://doi.org/10.1080/13607860903586078

Han, S. D., Boyle, P. A., James, B. D., Yu, L., & Bennett, D. A. (2016). Mild Cognitive

Impairment and Susceptibility to Scams in Old Age. *Journal of Alzheimer's Disease, 49*(3), 845–851. https://doi.org/10.3233/JAD-150442

Hafemeister, T. (2003). Financial Abuse of the Elderly in Domestic Settings. In R. Bonnie and R. Wallace (Eds.), Elder Mistreatment: Abuse, Neglect, and Exploitation in an Aging America. National Academies Press. https://www.nap.edu/read/10406/chapter/20

Irvin-Erickson, Y. & Ricks, A. (2019). Identity theft and fraud victimization: What we know about identity theft and fraud victims from research- and practice-based evidence. Center for Victim Research, 1-33. https://ncvc.dspacedirect.org/bitstream/handle/20.500.11990/1544/CVR%20Research%20Syntheses_Identity%20Theft%20and%20Fraud_Report.pdf?sequence=1&isAllowed=y.

Karp, N. & Kirkman, D. (2016). *Financial Frauds and Scams Against Elders: Government Responses and Resources.* National Consumer Law Center. https://www.nclc.org/national-elder-rights-training-project/consumer-fraud- scams/financial-frauds-scams-against-elders.html

Kawas, C. H., Legdeur, N., Corrada, M. M. (2021). What Have We Learned From Cognition in the Oldest-Old. *Current Opinion in Neurology*, *34*(2), 258-265 https://doi.org/10.1097/wco.0000000000000910

Lee, K. (2017). Financial fighting fraud. *Monitor on Psychology*, *48*(8). http://www.apa.org/monitor/2017/09/financial-fraud

Lester, J.N., Cho, Y., & Lochmiller, C. R. (2020). Learning to Do Qualitiative Data Analysis: A Starting Point. *Human Resource Development Review, 19(1),* 94-106. https://doi.org/10.1177/1534484320903890

Li, T., & Fung, H. H. (2013). Age Differences in Trust: An Investigation Across 38 Countries. *The Journals of Gerontology: Series B*, 68(3), 347-355. https://doi.org/10.1093/geronb/gbs072

Liu, P. J., Wood, S., Xi, P., Berger, D. E., & Wilber, K. (2017). The role of social support in elder financial exploitation using a community sample. *Innovation in Aging*, *1*(1).

Miller, J., Ward, C., Lee, C., D'Ambrosio, L., & Coughlin, J. (2020). Sharing is caring: The potential of the sharing economy to support aging in place. *Gerontology & Geriatrics Education*, *41*(4), 407–429. https://doi.org/10.1080/02701960.2018.1428575

Morgan, P. J., Huang, B., & Trinh, L. Q. (2019). The need to promote digital financial literacy for the digital age. *The Future of Work and Education in the Digital Age: G20 2019 Japan.*

Morgan, R. (2021). *Financial Fraud in the United States, 2017.* U.S Department of Justice Office of Programs Bureau of Justice Statistics. https://bjs.ojp.gov/content/pub/pdf/ffus17.pdf

Norris, G., Brookes, A. & Dowell, D. (2019). The Psychology of Internet Fraud Victimisation: A Systematic Review. *Journal of Police and Criminal Psychology* 34, 231–245. https://doi.org/10.1007/s11896-019-09334-5

O'Brien, M., Begley, E., Anand, J. C., Killick, C., & Taylor, B. J. (2011). *A Total Indifference to Our Dignity: Older People's Understandings of Elder Abuse*. Age Action Ireland.

O'Leary, J., Welle, A., & Agarwal, S. (2021, September). *Improving Trust in State and Local Government*. Deloitte Insights. https://www2.deloitte.com/us/en/insights/industry/public- sector/trust-in-state-local-government.html

Olivari, B.S., Baumgart, M., Lock, S.L., Whiting, C.G., Taylor, C.A., Iskander, J., Thorpe, P. & McGuire, L. (2018). *CDC Grand Rounds: Promoting Well-Being and Independence in Older Adults.* Morbidity and Mortality Weekly Report (MMWR). https://www.cdc.gov/mmwr/volumes/67/wr/mm6737a4.htm#suggestedcitation

Organization for Economic Co-Operation and Development. (2018). *G20/0ECD INFE Policy Guidance Digitalisation and Financial Literacy.* https://www.oecd.org/finance/G20- OECD-INFE-Policy-Guidance-Digitalisation-Financial-Literacy-2018.pdf

Ortman, J.M., Velkoff, V.A., & Hogan, H. (2014). *An Aging Nation: The Older Population in the United States.* U.S. Census Bureau. https://www.census.gov/content/dam/Census/library/publications/2014/demo/p25-1140.pdf

Palmer, K., Rivers, P., Melton, F*., et. al.* (2020). Protocol for a systematic review of health promotion interventions for African Americans delivered in US barbershops and hair salons. *BMJ Open*; 10**:**e035940. doi: 10.1136/bmjopen-2019-035940

Peterson, J. C., Burnes, D. P., Caccamise, P. L., Mason, A., Henderson, C. R., Jr, Wells, M. T., Berman, J., Cook, A. M., Shukoff, D., Brownell, P., Powell, M., Salamone, A., Pillemer,

K. A., & Lachs, M. S. (2014). Financial exploitation of older adults: a population-based prevalence study. *Journal of General Internal Medicine*, *29*(12), 1615–1623. https://doi.org/10.1007/s11606-014-2946-2
Phelan, A. (2008), Elder abuse, ageism, human rights and citizenship: implications for nursing discourse. *Nursing Inquiry, 15:* 320-329. https://doi.org/10.1111/j.1440-1800.2008.00423.x
Podnieks, E. (2006). Social inclusion: an interplay of the determinants of health—new insights into elder abuse. *Journal of Gerontological Social Work, 46*(3-4), 57-79.
Roller, M. R., & Lavrakas, P. J. (2015). *Applied qualitative research design: A total quality framework approach.* The Guilford Press.
Ross, M., Grossmann, I., & Schryer, E. (2014). Contrary to Psychological and Popular Opinion, There Is No Compelling Evidence That Older Adults Are Disproportionately Victimized by Consumer Fraud. *Perspectives on psychological science : a journal of the Association for Psychological Science*, *9*(4), 427–442. https://doi.org/10.1177/1745691614535935
Salters-Pedneault, K. (2020, June). *The Use of Self-Report Data in Psychology*. VeryWell Mind. https://www.verywellmind.com/definition-of-self-report-425267
Scommegna, P. (2004, April). *U.S. Growing Bigger, Older, and More Diverse*. PRB. https://www.prb.org/resources/u-s-growing-bigger-older-and-more-diverse/
Shao, J., Du, W., Lin, T., Li, X., Li, J., & Lei H. (2019): Credulity rather than general trust may increase vulnerability to fraud in older adults: a moderated mediation model. *Journal of Elder Abuse & Neglect, 31*(2), 146-162. https://doi.org/10.1080/08946566.2018.1564105
Sullivan-Wilson, J., & Jackson, K. L. (2014). Keeping older adults safe, protected, and healthy by preventing financial exploitation. *The Nursing Clinics of North America*, *49*(2), 201–212. https://doi.org/10.1016/j.cnur.2014.02.007
Sylaska, K. M., & Edwards, K. M. (2015). Disclosure experiences of sexual minority college student victims of intimate partner violence. *American Journal of Community Psychology*, *55*(3-4), 326–335. https://doi.org/10.1007/s10464-015-9717-z
The Centers for Disease Control and Prevention (CDC). (2015). Addressing Financial Exploitation Among People Living with Cognitive Impairment and Their Caregivers: Role of the Public Health and Aging Services Networks. https://www.cdc.gov/aging/pdf/exploitation-cognitive-impairment-brief-july-2015.pdf
The Financial Industry Regulatory Authority (FINRA) Foundation. (2019). *Exposed to Scams: What Separates Victims from Non-victims?* https://finrafoundation.org/sites/finrafoundation/files/exposed-to-scams-what-separates-victims-from-non-victims_0_0.pdf
United States Census Bureau. (2021). *Wealth, Asset Ownership, & Debt of Households Detailed Tables: 2019* [Data file]. Retrieved from https://www.census.gov/data/tables/2019/demo/wealth/wealth-asset-ownership.html
U.S. Department of Health and Human Services. (2018). *2017 Profile of Older Americans.* https://acl.gov/sites/default/files/Aging%20and%20Disability%20in%20America/2017OlderAmericansProfile.pdf
Vogels, E.A. (2019, September). *Millennials Stand Out for Their Technology Use, but Older Generations Also Embrace Digital Life.* Pew Research Center. https://www.pewresearch.org/fact-tank/2019/09/09/us-generations-technology-use/
Wood, S. (2021, January). *How Does Fraud Impact Emotional Well-Being?.* Psychology Today. https://www.psychologytoday.com/us/blog/the-fraud-crisis/202101/how-does-fraud-impact-emotional-well-being
Wood, S. (2017). Identification of Risk and Protective Factors for Elder Financial Exploitation. *Office of Justice Programs' National Criminal Justice Reference Service.* https://www.ojp.gov/pdffiles1/nij/grants/251034.pdf
Wood, S., & Lichtenberg, P. A. (2017). Financial Capacity and Financial Exploitation of Older Adults: Research Findings, Policy Recommendations and Clinical Implications. *Clinical Gerontologist*, *40*(1), 3–13. https://doi.org/10.1080/07317115.2016.1203382
Yamagishi, T. & Yamagishi, M. (1994). Trust and commitment in the United States and Japan. *Motivation and Emotion, 18*, 129-166.

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Knowing the "Don't Knows" in the National Financial Capability Study

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Abstract

This study examines the demographic propensity of responding "Don't Know" (DK) to a set of financial literacy questions provided by the National Financial Capability Study (NFCS), a nationally representative dataset. When given the opportunity to respond correctly, incorrectly, or DK, the inclusion of a DK response item uniquely encompasses facets of financial literacy that are often overlooked. While researchers utilizing the NFCS have historically excluded or dropped DK responses in empirical analyses or treated these responses as incorrect in financial literacy assessments, the findings suggest that the interpretation of DK responses may be better viewed as an amalgamation of survey participants' uncertainty, response confidence, ambiguity regarding the question, or unwillingness to respond, rather than an outright lack of financial literacy. The empirical results suggest that females tend to respond DK more frequently to financial literacy questions, and the highly educated and current and former military tend to select DK less frequently.

Keywords: financial literacy; national financial capability study (nfcs); personal finance; response theory; survey design

Introduction and Background

The National Financial Capability Study (NFCS) offers "Don't Know" (DK) as a response item for 95 questions in the 2021 State-by-State Survey. DK responses result in data interpretation difficulties and dilemmas regarding the treatment of these responses. Moreover, much of the literature on DK responses has yet to address the treatment concerns regarding DK responses in financial literacy, personal finance, and financial planning research. Understanding the contextual nature of survey participants who provide DK responses is fundamental for not only optimizing the utilization of the NFCS, but also for providing valuable insight into how financial literacy researchers should consider DK responses.

DK Responses

DK responses can be triggered by a variety of factors, such as lack of knowledge, lack of confidence, uncertainty, question ambiguity, survey fatigue, and an unwillingness to respond (Tourangeau et al., 2016; Waters et al., 2013). Denman et al. (2018) showed that initial DK responses may indicate hesitancy in responding due to a lack of knowledge, whereas persistent DK responses may indicate significant uncertainty or indecision. Survey participants may provide DK responses when questions are perceived as being personal or sensitive (Groothuis & Whitehead, 2002).

The maximization of data validity is a chief goal of survey design, which is why one of the common justifications for including a DK response option is to discourage guessing by survey participants (Tourangeau et al., 2016). However, survey protocols to discourage guessing are problematic when considering the range in which participants may react to a DK response option. DK response options would not be problematic if survey protocols could provide assurance that survey participants would react in a homogeneous manner to these protocols (Mondak, 2001). For instance, survey participants who do not know the correct response to a financial literacy question may still elect to guess, even when a DK response option is presented. Moreover, survey participants, who are somewhat certain that they know the correct response but are not confident, may select a DK response. With respect to financial literacy measurements, survey participants with identical financial literacy levels may receive different financial literacy evaluations when they differ in their propensity to provide a DK response. Thus, the interpretation of DK responses may be better viewed as an amalgamation of survey participants' uncertainty, response confidence, and unwillingness to respond, rather than an outright lack of financial literacy.

While DK responses present a variety of challenges for researchers, DK responses can also provide valuable insight and awareness into who provides DK responses. Understanding who provides DK responses offers researchers the capability to detect potential survey biases. For instance, if a particular demographic group is likely to respond DK, it may indicate that the group is less confident in selecting the correct response, despite knowledge level. As examined through a health lens, Waters et al. (2013) suggested DK responses in health diagnostic surveys may be more prevalent in populations affected by health disparities. With respect to financial literacy, the imbalance of financial literacy programs, training opportunities, and other financial literacy initiatives may result in a propensity to provide a DK response.

The literature suggests that DK response rates vary by demographics. Research has shown that females are more likely to provide a DK response compared to males when presented with identical survey questions (Mondak & Anderson, 2004; Van Es et al., 1996). Educational obtainment has been shown to have a negative relationship with the likelihood of providing a DK response (Riphahn & Serfling, 2005). An increase in age has been shown to be associated positively with providing a DK response (Rapoport, 1985; Shafto et al, 2010). In the U.S. context, ethnic identification has not been shown to be a clear predictor of DK response propensity (Peytchev et al., 2009).

The Use of the NFCS and DK Responses

The NFCS is a nationally representative study of the financial capability of adults in the United States, and its respective datasets have been utilized for a variety of financial literacy, personal finance, and financial planning research initiatives. For example, researchers have utilized the NFCS to understand the effects of financial education (Xiao & O'Neill, 2016), alternative financial services usage (Birkenmaier & Fu, 2016; Pearson, 2020), student debt (Korankye et al., 2023a; Pearson & Lee, 2022; Xiao et al., 2022), retirement planning (Lusardi & Mitchell, 2011; Nam & Loibl, 2021), financial satisfaction (Pearson & Korankye, 2022; Woodyard & Robb, 2016), annuity ownership (Korankye et al., 2023b), debt delinquency (Xiao & Kim, 2022), and personal financial salience (Pearson, 2021; Pearson, 2022). To note, roughly 15% of the papers published in the *Journal of Financial Counseling and Planning* from 2010 to 2020 utilized data collected from the NFCS (Xiao et al., 2022).

While a variety of treatment methodologies exist, DK responses are often treated as incorrect responses or excluded from statistical analyses (Hay et al., 2015; Waters et al., 2009). The literature provides evidence of studies using NFCS data that have dropped or excluded DK responses from econometric analyses (Babiarz & Robb, 2014; Xiao et al., 2014; Xiao et al., 2015) and researchers treating DK responses as incorrect responses (Porto & Xiao, 2016; Tokar Asaad, 2015). In some circumstances, researchers may find it necessary to drop or exclude DK responses from their empirical analyses; however, this results in a loss of data and creates complications when generalizing findings. Furthermore, the exclusion of DK responses has the potential to bias outcomes and compromise the validity of research findings. As noted by Denman et al. (2018), dropping or excluding DK responses from statistical analyses reduces statistical power and increases the likelihood of Type II errors. In the case of treating DK responses as incorrect responses, ambiguity regarding lack of knowledge or lack of response confidence may distort the interpretation of research findings.

In what follows, the authors, with two overarching goals, examine data collected from the NFCS to examine DK responses. The first goal is to underscore the importance of identifying the demographic characteristics of those who are more likely to provide DK responses. This goal is undertaken to facilitate financial literacy, personal finance, and financial planning research considerations. Furthermore, much of the literature on DK response selection has not been generalized across topical domains from nationally representative data (Young, 2012). Thus, the second goal of this study is to highlight the demographic variations of DK responses by using nationally representative data.

Methods

Data

Data collected from the 2021 National Financial Capability Study (NFCS) Full State-by-State Survey are utilized. The NFCS is a project of the Financial Industry Regulatory Authority (FINRA) Investor Education Foundation. The FINRA Investor Education Foundation commissioned the first national study of the financial capability of American adults in 2009 and conducts subsequent surveys in waves every three years. Survey weights are used for nationally representative results. Lin et al (2022) provide a comprehensive overview of the data. The sample size is 27,118.

Variables

The dependent variable of interest is Don’t Know (DK) responses when participants are asked a set of financial literacy questions. Participants are asked 5 financial literacy questions, which are provided in Table 1. For each of the 5 questions, participants could have responded correctly, incorrectly, don’t know, or prefer not to say. To capture the magnitude of DK response propensity, a DK variable is constructed. The DK variable is measured as the number of DK responses provided by a given participant. The explanatory variables of interest include gender, age, marital status, education, parental status, retirement status, ethnicity, military participation, and income.

Model
An ordered probit regression is estimated to understand the covariates' associations with responding DK. The DK dependent variable is ordered in nature, taking the form of zero DK responses (1), one DK response (2), two DK responses (3), three DK responses (4), four DK responses (5), and five DK responses (6).

The explanatory variables female, married, education, parent, and retired enter the model as binary variables, taking the form of "1" if the respondent identifies as female, identifies as married, has obtained at least a 4-year college degree, has a financially dependent child, and identifies as retired, respectively. A "0" is coded otherwise. Age enters the model as a continuous variable. Ethnic identifier, military, and household income enter the model as categorical variables, with White non-Hispanic, never military, and less than $15,000 serving as the respective reference categories. Average marginal effects are estimated to obtain the magnitudes of each of the covariates' effect on responding DK. The error term is assumed to follow a standard normal distribution.

Sensitivity Analysis
Ordered probit models are utilized when assuming that the dependent variable is ordinal. However, it could be appropriate to view DK response frequency as count data. Thus, a sensitivity analysis is conducted using a Poisson regression model with the same dependent and independent variables as the ordered regression model. Poisson regressions fit models of nonnegative occurrences, or "count" outcomes. Figure 1 implies that a Poisson distribution could exist, and thus the results from a Poisson regression can offer further insight into the investigation.

Results

Descriptive Statistics of the Sample
Table 1 presents the financial literacy questions from which the DK responses were examined, as well as a comparison of the DK and correct responses. It is observed that two of the five questions had a DK response frequency greater than the respective correct response frequency. Additionally, participants tended to select DK more frequently when the correct response rate was low. For instance, on the question regarding the effect of interest rate changes on bond prices, 25.51% (39.55%) of the participants responded correctly (DK). The question on if 15-year mortgages require higher monthly payments than 30-year mortgages had the highest correct response frequency, with 71.54% (19.95%) responding correctly (DK). The DK response occurrences ranged from 14.37% to 44.67%.

Table 2 provides a frequency distribution of the number of DK responses. 9,888 (36.46%) of the total sample responded DK 0 times, implying that the majority of the sample had at least 1 DK response. 6,436 (23.73%) responded DK 1 time, 5,077 (18.72%) responded DK 2 times, 2,704 (9.97%) responded DK 3 times, 1,624 (5.99%) responded DK 4 times, and 1,389 (5.12%) responded DK 5 times. There were 373 total "prefer not to say" responses.

Table 3 compares the descriptive statistics of the total sample to the (subsample of participants responding DK at least once). 54.03% (63.05%) were female, the average age was 47.51 (45.90), 48.97% (43.63%) were married, 35.39% (27.63%) had at least a 4-year college degree, 63.48% (60.82%) had at least 1 child, and 21.59% (18.97%) were retired. Regarding the ethnic identifiers, 73.98% (73.49%) responded as White non-Hispanic, 10.02% (10.43%) responded as Black non-Hispanic, 8.39% (8.96%) responded as Hispanic (alone or in combination), 4.40% (3.55%) responded as Asian/Pacific Islander non-Hispanic, and 3.22% (3.56%) responded as Other non-Hispanic (American Indian, Other, 2+ ethnicities). Regarding Military Service, 86.12% (89.63%) responded as Never Military, 2.07% (1.16%) responded as Current Military, 10.01% (7.49%) responded as Previously Military, and 1.18% (1.71%) responded as Prefer Not to Say. Regarding household income, 80.66% (87.11%) had a household income below $100,000, with 12.27% (15.45%) having a household income of less than $15,000.

Table 4 compares the descriptive statistics of the subsample of participants responding DK 0 times to the (subsample of participants responding DK at least once). 63.05% (38.49%) were female, the average age was 50.43 (45.90), 58.25% (43.63%) were married, 49.47% (27.63%) had at least a 4-year college degree, 68.05% (60.82%) had at least 1 child, and 26.36% (18.97%) were retired. Regarding the ethnic identifiers, 74.97% (73.49%) responded as White non-Hispanic, 9.26% (10.43%) responded as Black non-Hispanic, 7.27% (8.96%) responded as Hispanic (alone or in combination), 5.85% (3.55%) responded as Asian/Pacific Islander non-Hispanic, and 2.56% (3.56%) responded as Other non-Hispanic (American Indian, Other, 2+ ethnicities). Regarding Military Service, 80.09% (89.63%) responded as Never Military, 3.64% (1.16%) responded as Current Military, 14.33% (7.49%) responded as

Previously Military, and 1.94% (1.71%) responded as Prefer Not to Say. Regarding household income, 68.97% (87.11%) had a household income below $100,000, with 6.87% (15.45%) having a household income of less than $15,000.

Econometric Results

Table 5 provides the average marginal effects and standard errors from the ordered probit regression. Females were 15.30% ($p < 0.001$) less likely than males to respond DK 0 times and were 4.42% ($p < 0.001$) more likely to respond DK 5 times. Participants with at least a 4-year college degree were 11.66% ($p < 0.001$) more likely than participants without a 4-year college degree to respond DK 0 times and were 3.37% ($p < 0.001$) less likely to respond DK 5 times. Compared to participants who never served in the military, current military participants and previous military participants were 22.09% ($p < 0.001$) and 5.31% ($p < 0.001$) more likely to respond DK 0 times, respectively. Compared to participants who never served in the military, current military participants and previous military participants were 3.89% ($p < 0.001$) and 1.37% ($p < 0.001$) less likely to respond DK 5 times, respectively. When compared with participants having a household income of less than $15,000, higher income categories, generally, were found to have positive associations with responding DK 0 times and negative associations with responding DK 5 times. It is observed that when compared to participants having a household income of less than $15,000, participants having a household income of $300,000 or more were 32.78% ($p < 0.001$) more likely to respond DK 0 times and 7.04% ($p < 0.001$) less likely to respond DK 5 times.

While other findings revealed statistically significant associations, the magnitude of the remaining results yielded trivial economic significance. The direction of the associations for responding DK 0 times include: (+) age ($p < 0.001$), (+) parent ($p < 0.001$), (+) retired ($p < 0.001$), (-) Black non-Hispanic compared to White non-Hispanic ($p < 0.05$), (+) Asian/Pacific Islander non-Hispanic compared to White non-Hispanic ($p < 0.001$). The direction of the associations for responding DK 5 times: (-) age ($p < 0.001$), (-) parent ($p < 0.001$), (-) retired ($p < 0.001$), (+) Black non-Hispanic compared to White non-Hispanic ($p < 0.05$), (-) Asian/Pacific Islander non-Hispanic compared to White non-Hispanic ($p < 0.001$). The results for marital status yielded no statistically significant associations.

Sensitivity Analysis Results (tables and figures not provided to meet proceedings requirements)

Table 6 and Table 7 provide the coefficients and the incidence-rate ratios (IRRs) from the Poisson regression, respectively. The IRRs are the outcome of exponentiating the Poisson regression coefficients in Table 6. Overall, the Poisson regression results are similar to those obtained from the ordered probit regression. Interpretations for some of the explanatory variables are as follows. All else equal, Table 6 indicates that the difference in the logs of expected DK counts is likely to be 0.39 units higher for females than males. The IRR in Table 7 also shows that females have 1.50 times more DK responses than males. In other words, being female is associated with an increase of 50% rate of providing DK responses relative to being male. Relative to those without a 4-year college degree, participants with at least a 4-year college degree have a 0.72 times lower DK responses (Table 7). This represents a reduction of 28% rate of providing DK responses for those with higher educational obtainment. A one-year increase in a person's age is associated with a reduction in the rate of providing DK responses by a factor of 0.99 (Table 7). Compared to someone who has never been in the military, Table 7 shows that current and former military personnel have 0.54 and 0.82-times lower number of DK responses, respectively.

Discussion and Implications

This study examined the demographic propensity of responding Don't Know (DK) to five financial literacy questions using the National Financial Capability Study (NFCS), a nationally representative data set. When taken in their totality, the results generally revealed that females compared to males were more likely to respond DK to the financial literacy questions, aligning with prior research findings in other research domains (Mondak & Anderson, 2004; Van Es et al., 1996). The results additionally revealed that those with at least a 4-year college degree and those with current or prior military service were less likely to respond DK to financial literacy questions. Other statistically significant associations were found, however, the magnitude of these results revealed trivial economic significance.

The positive association found between identifying as female and responding DK may have historical roots. Personal finance and household financial management responsibilities have historically been male endeavors in U.S. households. As noted by Pearson et al. (2023), one of the advantages of forming a household is derived from the concept that individuals have differences in the production possibilities among household functions. If males have historically been household financial managers, then males have historically had a rational incentive to develop their financial literacy. This may have resulted in males having a financial literacy comparative advantage compared to females in the household, resulting in an irrational incentive for females to obtain financial literacy training when operating under the comparative advantage theoretical framework. Moreover, an argument can be made that the resulting societal stigma of males needing to take on the responsibilities of household financial management may have resulted in females being less confident in their responses to the financial literacy questions. Consequently, one implication of the findings is the need to destigmatize household financial leadership as a means to promote equal financial literacy opportunities.

When considering the education findings, those with at least a 4-year college degree were less likely to respond DK to the set of financial literacy questions. At the surface, a conclusion may be drawn that those with a 4-year college degree have obtained greater educational obtainment and thus are more likely to respond correctly. When considering the work of Ziller & Long (1965), an additional consideration is that highly educated survey participants may resist admitting to a lack of knowledge and have less inclination to provide a DK response. In other words, highly educated survey participants may perceive a DK response as evidence of a personal defect and elect to provide a response, regardless of whether the response is correct.

The military findings could be explained by the organizational belief structures that are byproducts of military culture and training. For example, Burks et al (2013) suggest that signaling that one occupies a stronger position than one may actually hold can be useful in deterring rival forces. Perhaps responding DK, even in financial literacy assessments, may be perceived as a signal of weakness by military personnel. Consequently, current and former military personnel may be more reluctant to provide DK responses. Financial counselors and practitioners working with military clients can benefit from understanding the role of military belief structures and subjective and objective financial literacy evaluations.

Of particular note are the findings from Table 1. When considering that DK was a response option for the five questions examined, there remained a number of survey participants who still selected incorrect response items in all five financial literacy questions that were assessed. For instance, regarding the question on interest rates rising and the effect on bond prices, 25.51% responded correctly and 39.55% responded DK, implying that roughly 34.94% responded incorrectly. An implication of the findings for survey design is to ensure survey participants are aware that guessing is not an acceptable option. For instance, survey instructions may consider using a phrase such as, "Please do not guess, even if you do not know the correct response to a question." This phrase, or a variation thereof, may provide improved identification of survey participants who choose DK and survey participants who elect to guess. Future financial literacy research would benefit from understanding why survey participants select incorrect responses when a DK response is available. As an additional consideration, instead of DK as a response item, financial literacy surveys could request that participants indicate their confidence levels for each selected response. Consequently, this would allow future research to examine the intersection of objective financial knowledge and financial literacy confidence, providing a more robust insight into financial literacy assessment.

References

Alexander, E. C. (2018). Don’t know or won’t say? Exploring how colorblind norms shape item nonresponse in social surveys. *Sociology of Race and Ethnicity*, *4*(3), 417-433. https://doi.org/10.1177/2332649217705145

Babiarz, P., & Robb, C. A. (2014). Financial literacy and emergency saving. *Journal of Family and Economic Issues*, *35*, 40-50. https://doi.org/10.1007/s10834-013-9369-9

Birkenmaier, J., & Fu, Q. (2016). The association of alternative financial services usage and financial access: Evidence from the National Financial Capability Study. *Journal of Family and Economic Issues*, *37*, 450-460. https://doi.org/10.1007/s10834-015-9463-2

Burks, S. V., Carpenter, J. P., Goette, L., & Rustichini, A. (2013). Overconfidence and social signalling. *Review of Economic Studies*, *80*(3), 949-983. https://doi.org/10.1093/restud/rds046

Denman, D. C., Baldwin, A. S., Betts, A. C., McQueen, A., & Tiro, J. A. (2018). Reducing “I don’t know” responses and missing survey data: Implications for measurement. *Medical Decision Making*, *38*(6), 673-682. https://doi.org/10.1177/0272989x18785159

Groothuis, P. A., & Whitehead, J. C. (2002). Does don't know mean no? Analysis of'don't know'responses in dichotomous choice contingent valuation questions. *Applied Economics*, *34*(15), 1935-1940. https://doi.org/10.1080/00036840210128717

Hay, J. L., Orom, H., Kiviniemi, M. T., & Waters, E. A. (2015). "I don't know" my cancer risk: exploring deficits in cancer knowledge and information-seeking skills to explain an often-overlooked participant response. *Medical Decision Making*, *35*(4), 436-445.https://doi.org/10.1177/0272989x15572827
Korankye, T., Pearson, B., & Salehi, H. (2023a). Financial advice use and saving for children's college education: A propensity score matching approach. *Journal of Financial Counseling and Planning, 34*(1), 96-111. https://doi.org/10.1891/JFCP-2021-0069
Korankye, T., Pearson, B., & Salehi, H. (2023b). The nexus between investor sophistication and annuity insurance ownership: Evidence from FINRA's National Financial Capability Study. *Managerial Finance. 49*(2), 398-419. https://doi.org/10.1108/MF-04-2022-016
Lin, J. T., Bumcrot, C., Mottola, G., Valdes, O., Ganem, R., Kieffer, C., Lusardi, A., & Walsh, G. (2022). Financial Capability in the United States: Highlights from the FINRA Foundation National Financial Capability Study (5th Edition). FINRA Investor Education Foundation. www.FINRAFoundation.org/NFCSReport2021
Lusardi, A., & Mitchell, O. S. (2011). Financial literacy and retirement planning in the United States. *Journal of Pension Economics & Finance*, *10*(4), 509-525. https://doi.org/10.3386/w17108
Mondak, J. J. (2001). Developing valid knowledge scales. *American Journal of Political Science*, 224-238. https://doi.org/10.2307/2669369
Mondak, J. J., & Anderson, M. R. (2004). The Knowledge Gap: A Reexamination of Gender Based Differences in Political Knowledge. *Journal of Politics, 66*(2), 492-512. https://doi.org/10.1111/j.1468-2508.2004.00161.x
Nam, Y., & Loibl, C. (2021). Financial capability and financial planning at the verge of retirement age. *Journal of Family and Economic Issues*, *42*(1), 133-150. https://doi.org/10.1007/s10834-020-09699-4
Pearson, B. (2020). Demographic variations in the perception of the investment services offered by financial advisors. *Journal of Accounting and Finance, 20*(3), 127-139. https://doi.org/10.33423/jaf.v20i3.3014
Pearson, B. (2021). The role of personal financial salience. *Journal of Financial Planning, 34*(8), 74-86.
Pearson, B. (2022). The role of personal financial salience: Part II. *Journal of Financial Planning, 35*(9), 60-69.
Pearson, B., Korankye, T., & Salehi, H. (2023). Comparative advantage in the household: should one person specialize in a household's financial matters?. *Journal of Family and Economic Issues*, *44*(1), 114-124. https://doi.org/10.1007/s10834-021-09807-y
Pearson, B., & Korankye, T. (2022). The association between financial literacy confidence and financial satisfaction. *Review of Behavioral Finance.* In-Press. https://doi.org/10.1108/RBF-03-2022-0090
Pearson, B., & Lee, J. (2022). Student debt and healthcare service usage. *Journal of Financial Counseling and Planning, 33*(2), 183-193. https://doi.org/10.1891/JFCP-2021-
Peytchev, A., Baxter, R. K., & Carley-Baxter, L. R. (2009). Not all survey effort is equal: Reduction of nonresponse bias and nonresponse error. *Public Opinion Quarterly, 73*(4), 785-806. https://doi.org/10.1093/poq/nfp037
Porto, N., & Xiao, J. J. (2016). Financial literacy overconfidence and financial advice seeking. *Journal of Financial Service Professionals*, *70*(4), 78-88.
Rapoport, R. B. (1985). Like Mother, Like Daughter: Intergenerational Transmission of DK Response Rates. *Public Opinion Quarterly, 49*(2), 198-208. https://doi.org/10.1086/268914
Riphahn, R. T., & Serfling, O. (2005). Item non-response on income and wealth questions. *Empirical Economics*, *30*(2), 521-538. https://doi.org/10.1007/s00181-005-0247-7
Shafto, M. A., Stamatakis, E. A., Tam, P. P., & Tyler, L. K. (2010). Word retrieval failures in old age: the relationship between structure and function. *Journal of Cognitive Neuroscience*, *22*(7), 1530-1540. https://doi.org/10.1162/jocn.2009.21321
Tokar Asaad, C. (2015). Financial literacy and financial behavior: Assessing knowledge and confidence. *Financial Services Review*, *24*(2), 101-117.
Tourangeau, R., Maitland, A., & Yan, H. Y. (2016). Assessing the scientific knowledge of the general public: The effects of question format and encouraging or discouraging don't know responses. *Public Opinion Quarterly*, *80*(3), 741-760. https://doi.org/10.1093/poq/nfw009
Van Es, J., Lorence, D., Morgan, G., & Church, J. (1996). Don't Know Responses in Environmental Surveys. *Journal of Environmental Education, 27*(4), 13-18. https://doi.org/10.1080/00958964.1996.9941470
Waters, E. A., Weinstein, N. D., Colditz, G. A., & Emmons, K. (2009). Explanations for side effect aversion in preventive medical treatment decisions. *Health Psychology*, *28*(2), 201. https://doi.org/10.1037/a0013608
Waters, E. A., Hay, J. L., Orom, H., Kiviniemi, M. T., & Drake, B. F. (2013). "Don't know" responses to risk perception measures: implications for underserved populations. *Medical Decision Making*, *33*(2), 271-281. https://doi.org/10.1177/0272989x12464435

Woodyard, A. S., & Robb, C. A. (2016). Consideration of financial satisfaction: What consumers know, feel and do from a financial perspective. *Journal of Financial Therapy, 7*(2), 41-61. https://doi.org/10.4148/1944-9771.1102

Xiao, J. J., Chen, C., & Chen, F. (2014). Consumer financial capability and financial satisfaction. *Social Indicators Research*, *118*, 415-432. https://doi.org/10.1007/s11205-013-0414-8

Xiao, J. J., Chen, C., & Sun, L. (2015). Age differences in consumer financial capability. *International Journal of Consumer Studies*, *39*(4), 387-395. https://doi.org/10.1111/ijcs.12205

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. https://doi.org/10.1007/s10834-021-09767-3

Xiao, J. J., Lavigueur, B., Izenstark, A., Hanna, S., & Lawrence, F. C. (2020). Three decades of the journal of financial counseling and planning. *Journal of Financial Counseling and Planning*, *31*(1), 5-13. https://doi.org/10.1891/jfcp-20-00010

Xiao, J. J., & O'Neill, B. (2016). Consumer financial education and financial capability. *International Journal of Consumer Studies, 40*(6), 712-721. https://doi.org/10.1111/ijcs.12285

Xiao, J. J., Porto, N., & Mason, I. M. (2020). Financial capability of student loan holders who are college students, graduates, or dropouts. *Journal of Consumer Affairs*, *54*(4), 1383-1401.https://doi.org/10.1111/joca.12336

Young, R. L. (2012). Don't know responses in survey research.

Ziller, R. C., & Long, B. H. (1965). Some Correlates of the Don't-Know Response in Opinion Questionnaires. *Journal of Social Psychology, 67*(1), 139-147. https://doi.org/10.1080/00224545.1965.9922264

Tables

Table 1: Response Comparison of Responding Correctly and Responding Don't Know

	Responded Correctly	Responded Don't Know
Suppose you had \$100 in a savings account and the interest rate was 2% per year. After 5 years, how much do you think you would have in the account if you left the money to grow? *Correct Response:* More than \$102.	71.11%	14.37%
Imagine that the interest rate on your savings account was 1% per year and inflation was 2% per year. After 1 year, how much would you be able to buy with the money in this account? *Correct Response:* Less than today.	55.10%	22.12%
If interest rates rise, what will typically happen to bond prices? *Correct Response:* They will fall.	25.51%	39.55%
A 15-year mortgage typically requires higher monthly payments than a 30-year mortgage, but the total interest paid over the life of the loan will be less. *Correct Response:* True.	71.54%	19.95%
Buying a single company's stock usually provides a safer return than a stock mutual fund. *Correct Response:* False.	43.13%	44.67%

Data collected from the National Financial Capability Study
N = 27,118

Table 2: Frequency Distribution of Don't Know Responses

	Number of DK Responses	Percent
0 DK Responses	9,888	36.46
1 DK Responses	6,436	23.73
2 DK Responses	5,077	18.72
3 DK Responses	2,704	9.97
4 DK Responses	1,624	5.99
5 DK Responses	1,389	5.12

Data collected from the National Financial Capability Study
N = 27,118

Table 3: Descriptive Statistics of Full Sample and At Least 1 Don't Know Response

	Full Sample		At Least 1 DK
	Mean	Standard Dev.	Mean
Female	54.03%	0.50	63.05%
Age	47.51	17.15	45.90
Married	48.97%	0.50	43.63%
Education (4-Year College Degree +)	35.39%	0.48	27.63%
Parent	63.48%	0.48	60.82%
Retired	21.59%	0.41	18.97%
Ethnic Identifier			
White non-Hispanic	73.98%	0.44	73.49%
Black non-Hispanic	10.02%	0.30	10.43%
Hispanic (alone or in combination)	8.39%	0.28	8.96%
Asian/Pacific Islander non-Hispanic	4.40%	0.21	3.55%
Other non-Hispanic (American Indian, Other, 2+ ethnicities)	3.22%	0.18	3.56%
Military			
Never Military	86.12%	0.35	89.63%
Current Military	2.07%	0.14	1.16%
Previously Military	10.01%	0.30	7.49%
Prefer Not to Say	1.81%	0.13	1.71%
Household Income			
Less than $15,000	12.27%	0.33	15.45%
At least $15,000 but less than $25,000	10.85%	0.31	13.19%
At least $25,000 but less than $35,000	10.76%	0.31	12.20%
At least $35,000 but less than $50,000	14.19%	0.35	15.66%
At least $50,000 but less than $75,000	18.46%	0.39	18.05%
At least $75,000 but less than $100,000	13.17%	0.34	11.34%
At least $100,000 but less than $150,000	12.80%	0.33	9.55%
At least $150,000 but less than $200,000	4.47%	0.21	2.84%
At least $200,000 but less than $300,000	2.07%	0.14	1.23%
$300,000 or more	0.98%	0.10	0.50%

Data collected from the National Financial Capability Study
N = 27,118 (full sample); N = 16,857 (At least 1 DK)
There were 373 total "prefer not to say" responses.

Table 4: Descriptive Statistics of At Least 1 Don't Know Response and Zero Don't Know Responses

	At Least 1 DK Sample		Zero DK Sa
	Mean	Standard Dev.	
Female	63.05%	0.48	38.49%
Age	45.90	17.05	50.43
Married	43.63%	0.50	58.25%
Education (4-Year College Degree +)	27.63%	0.45	49.47%
Parent	60.82%	0.49	68.05%
Retired	18.97%	0.39	26.36%
Ethnic Identifier			
White non-Hispanic	73.49%	0.44	74.97%
Black non-Hispanic	10.43%	0.31	9.26%
Hispanic (alone or in combination)	8.96%	0.29	7.27%
Asian/Pacific Islander non-Hispanic	3.55%	0.19	5.85%
Other non-Hispanic (American Indian, Other, 2+ ethnicities)	3.56%	0.19	2.65%
Military			
Never Military	89.63%	0.30	80.09%
Current Military	1.16%	0.11	3.64%
Previously Military	7.49%	0.26	14.33%

Prefer Not to Say	1.71%	0.13	1.94%
Household Income			
Less than $15,000	15.45%	0.36	6.87%
At least $15,000 but less than $25,000	13.19%	0.34	6.78%
At least $25,000 but less than $35,000	12.20%	0.33	8.25%
At least $35,000 but less than $50,000	15.66%	0.36	11.55%
At least $50,000 but less than $75,000	18.05%	0.38	19.19%
At least $75,000 but less than $100,000	11.34%	0.32	16.33%
At least $100,000 but less than $150,000	9.55%	0.29	18.43%
At least $150,000 but less than $200,000	2.84%	0.17	7.27%
At least $200,000 but less than $300,000	1.23%	0.11	3.52%
$300,000 or more	0.50%	0.07	1.81%

Data collected from the National Financial Capability Study
N = 16,857 (At least 1 DK); N = 9,888 (Zero DK)
There were 373 total "prefer not to say" responses.

Table 5: Don't Know Ordered Probit Regression Average Marginal Effects

	0 DK	**1 DK**	**2 DK**	**3 DK**	
	Average Marginal Effect (Standard Error)	Average Marginal Effect (Standard Error)	Average Marginal Effect (Standard Error)	Average Marginal Effect (Standard Error)	Avera (Stan
Female	-0.1530* (0.0045)	-0.0051* (0.0006)	0.0391* (0.0013)	0.0405* (0.0014)	0.034
Age	0.0024* (0.0002)	0.0001* (0.0000)	-0.0006 * (0.0000)	-0.0006* (0.0000)	-0.000
Married	0.0071 (0.0052)	0.0002 (0.0002)	-0.0018 (0.0013)	-0.0019 (0.0014)	-0.00
Education (4-Year College Degree +)	0.1166* (0.0050)	0.0039* (0.0005)	-0.0298* (0.0014)	-0.0309* (0.0014)	-0.026
Parent	0.0375* (0.0049)	0.0013* (0.0002)	-0.0096* (0.0013)	-0.0099* (0.0013)	-0.008
Retired	0.0345* (0.0071)	0.0012* (0.0003)	-0.0088* (0.0018)	-0.0091* (0.0019)	-0.007
Ethnic Identifier (White non-Hispanic as Reference)					
Black non-Hispanic	-0.0147† (0.0074)	-0.0006 (0.0004)	0.0037† (0.0018)	0.0039† (0.0020)	0.003
Hispanic (alone or in combination)	-0.0118 (0.0079)	-0.0005 (0.0004)	0.0031 (0.0021)	0.0031 (0.0021)	0.002
Asian/Pacific Islander non-Hispanic	0.0503* (0.0117)	-0.0004 (0.0005)	-0.0138* (0.0034)	-0.0130* (0.0030)	-0.010
Other non-Hispanic (American Indian, Other, 2+ ethnicities)	-0.0187 (0.0122)	-0.0009 (0.0008)	0.0047 (0.0032)	0.0050 (0.0033)	0.004
Military (Never Military as Reference)					
Current Military	0.2209* (0.0184)	-0.0254* (0.0047)	-0.0675* (0.0062)	-0.0519* (0.0038)	-0.037
Previously Military	0.0531* (0.0084)	0.0002 (0.0003)	-0.0144* (0.0024)	-0.0139* (0.0022)	-0.011
Prefer Not to Say	0.0117 (0.0168)	0.0004 (0.0005)	-0.0030 (0.0044)	-0.0031 (0.0045)	-0.00
Household Income (Less than $15,000 as Reference)					
At least $15,000 but less than $25,000	0.0228† (0.0081)	0.0052† (0.0019)	-0.0041† (0.0015)	-0.0069† (0.0024)	-0.006
At least $25,000 but less than $35,000	0.0671* (0.0085)	0.0120* (0.0016)	-0.0141* (0.0019)	-0.0199* (0.0026)	-0.018
At least $35,000 but less than $50,000	0.0828* (0.0081)	0.0135* (0.0016)	-0.0181* (0.0018)	-0.0245* (0.0024)	-0.022
At least $50,000 but less than $75,000	0.1276* (0.0081)	0.0151* (0.0015)	-0.0306* (0.0020)	-0.0369* (0.0025)	-0.032
At least $75,000 but less than $100,000	0.1583* (0.0093)	0.0143* (0.0016)	-0.0398* (0.0025)	-0.0450* (0.0028)	-0.038
At least $100,000 but less than $150,000	0.1913* (0.0101)	0.0118* (0.0016)	-0.0503* (0.0029)	-0.0533* (0.0029)	-0.044
At least $150,000 but less than $200,000	0.2515* (0.0147)	0.0032 (0.0027)	-0.0702* (0.0048)	-0.0674 * (0.0038)	-0.053
At least $200,000 but less than $300,000	0.2725* (0.0204)	-0.0010 (0.0042)	-0.0773* (0.0068)	-0.0720* (0.0048)	-0.056
$300,000 or more	0.3278* (0.0287)	-0.0145 (0.0079)	-0.0962* (0.0098)	-0.0833* (0.0059)	-0.063

Data collected from the National Financial Capability Study
N = 27,118
*Significance is defined as follows: † significant at $p < 0.05$; * significant at $p < 0.001$*

An Exploratory Study of Hispanic Households and their use of Student Loans

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Abstract

Student loan debt has been found to be a contributor to the wealth gap between White and Hispanic Households. To aid practitioners with the task of understanding, educating and guiding families, the purpose of this exploratory study was to provide a glimpse into the differences in student loan borrowing between White and Hispanic households. Results showed no significant difference in the rate of student loan usage between Hispanic and White households. However, a larger proportion of Hispanics without a college degree have student loans for their children, which may suggest cultural differences. Implications for financial advisors are discussed.

Keywords: student loans, Hispanic households, household borrowing decisions

Background

As the cost of higher education in the United States keeps rising, so has student loan borrowing among college students and their families, with total student loan debt recently surpassing the $1.5 trillion mark (Mitchell et al., 2019; Black et al., 2023). Although access to higher education is, perhaps, the most important source of opportunity for an improved personal and financial well-being, the shadow of student loan debt can loom largely among college graduates, especially minorities (Espinosa et al., 2019). The burdensome nature of student loan debt and its long-term implications on the financial well-being of borrowers have raised concerns among researchers and policymakers alike (Kakar et al., 2019). Student loan debt has been found to be a significant contributor to the wealth gap between White and Hispanic households (Kakar et al., 2019). Therefore, understanding the impact of student loans on various demographic groups is crucial to inform effective financial counseling interventions to mitigate the financial challenges faced by households.

It has been argued that student loans are "good debt," "favorable debt," or even a type of "investment" since there is an expectation of financial returns to the family unit based on potential future earnings of individuals. However, if left unmanaged, education debt has the potential to transform into unfavorable debt, leading to a decrease in the financial well-being of consumers and hindering their future financial prosperity (Alvarez, 2020; Xiao & Yao, 2020; Yao & Xiao, 2023).

In particular, the Hispanic population in the United States has experienced significant growth in recent years and comprises a substantial proportion of college students. Hispanic households have different financial behaviors and are faced with unique challenges when it comes to managing their finances. This includes a lower median income, financial insolvency, shorter financial planning horizons, higher likelihood to spend more than their income, and higher poverty rates compared to non-Hispanic households (Aguila & Lee, 2022; US Census Bureau, 2021; Rubio et al., 2022). Although percentagewise the number of Hispanic individuals with student loan debt is not significantly different to their non-Hispanic White counterparts, a larger proportion of Hispanics have student loan debt for their children and grandchildren than Blacks and non-Hispanic Whites (Braga, 2016). In addition, Chan et al. (2019) found that although Hispanics are 1.2 times less likely to borrow than their White counterparts, 6-year graduation rates and other educational attainment measures lag for Hispanics while also having a higher default rate when compared to non-Hispanic Whites. The lower borrowing activity exercised by Hispanics can partially be attributed to this group not pursuing a college degree at all; according to the U. S. Census Bureau (2022) Hispanics as a group have the lowest educational attainment level in the United States with only 21% of Hispanics having a bachelor's degree or higher, compared to 42% of non-Hispanic Whites, 28% of African Americans, and 61% of Asians (U. S. Census Bureau, 2022).

Purpose

As the US becomes more diverse, it is imperative that financial counselors and educators consider the differences in financial behaviors of minority groups as well as the reasons behind those behaviors. To aid practitioners with the task of understanding, educating and guiding families, the purpose of this study was threefold. First, to investigate if Hispanic households use student loans at a different rate than White households. Considering that Hispanics are more likely to be financially vulnerable and that they have different financial behavior than Whites, the second purpose was to investigate if Hispanics households are more likely to use education loans to finance other family members' education. Thirdly, this study investigated if the financial behavior of Hispanics who have student loans for others is different compared to their White counterparts.

Conceptual Background and Theory

The study of financial decisions of individuals is hardly an issue that can be isolated to that particular individual. Cultural factors such as family dynamics, ethnicity, gender, and socioeconomic status have a significant impact on our attitudes, which in turn influence our financial decision-making (Britt, 2016). In fact, family has been found to be the most influential group for the development of financial behaviors; family decision makers are responsible for making decisions that encompass the financial well-being of all family members (Kim et al., 2017).
Family Systems Theory looks at family financial decisions as an interconnected framework of individuals, families, and larger environments to account for influences stemming from community, culture, and other values (Rettig, 1993). For instance, the individualism-collectivism cultural dimension has been identified as a particularly strong influence on family financial decisions: goals are established for the family, then the family creates rules that emphasize shared values and limited resources and, finally, a decision is made (Kim et al., 2017).

A big part of family life is the issue of (having) children. Their influence can be direct or indirect; they affect resources, risk tolerance, asset allocation, among others (Love, 2010; Scholz & Seshadri, 2007). It would be easy to extrapolate their influence on a financial decision that involves not only them personally, but the family unit's present and future: education loans. Therefore, the Family Systems Theory provides a framework to investigate a household's willingness to take on debt to finance their members' education.

Research Questions

Based on the previous background and conceptual framework, the following research questions are presented:
RQ1: Do Hispanics continue to use student loans to finance their education at the same rate as non-Hispanic Whites?
RQ2: Do Hispanics acquire student loans for use by others (spouse, children) more than non-Hispanic Whites? Does this vary depending on educational attainment?
RQ3: How does the financial behavior of Hispanics with student loans for use by others differ to that of their non-Hispanic White counterparts?

Methodology

This study used the 2019 Survey of Consumer Finances (SCF). This is a triennial, cross-sectional survey that includes detailed financial information of U.S. households. This survey is sponsored by the Board of Governors of the Federal Reserve System in cooperation with the Statistics of Income Division of the Internal Revenue System. The SCF uses a dual-frame sample design to provide reliable information about characteristics of the U.S. population. Cases are drawn from a geographically based random sample, or from a special oversample of relatively wealthy families. Due to the survey's design, weights are required in order to make estimates for the general population (Kennickell, 1998).

The public version of the 2019 SCF has 5,777 observations. This study only included White and Hispanic households, resulting in a sample size of 4,701. There were 4,143 White households and 558 Hispanic households.

The following variables were used for this study: race/ethnicity, education loans, number of education loans, beneficiary of loans, amount of loans, age, household size, income, gender, marital status, level of education, financial planning horizon, spending behavior, and financial literacy.

With regards to race/ethnicity, in the 2019 SCF respondents were asked for the category that best describes them: White, Black or African-American, Hispanic or Latino, Asian, American Indian or Alaska Native, Hawaiian Native or other Pacific Islander, or another. Therefore, race/ethnicity was categorized as White or Hispanic/Latino. The education loans variable was coded as 1 if the household had student loans and 0 otherwise. The number of education loans variable had three categories: One loan, two loans, or three or more loans. The beneficiary of loans variable had three categories: loan is for self, loan is for spouse, or loan is for children. Education loan amount, age, household size, and income were continuous variables. Marital status had two categories: married (coded as 1) and not married (coded as 0). Level of education had two categories: some college or less, or at least a college degree. The financial planning horizon had four categories: plan for the next few months, plan for the next year, plan for the next few years, plan for the next five to ten years, and plan for longer than 20 years. Spending behavior had three categories: spends more than income, same as income, or less than income. The financial literacy variable was a continuous variable that measured the respondent's self-assessment about their knowledge of personal finance based on a scale. Zero was "not knowledgeable at all" and 10 was "very knowledgeable". Chi-square analysis was used to compare categorical variables by race/ethnicity, by level of education, and by recipient of education loans. ANOVA was used to compare continuous variables by race/ethnicity.

Table 1 shows weighted descriptive statistics for White and Hispanic households. Seventeen percent of Hispanic households had student loans, as compared to 20% of White households. Almost 49% of Hispanics and 42% of Whites had student loans for themselves; thirty seven percent of Hispanics and 41% of Whites had student loans for their spouse, and 14% of Hispanics and almost 17% of Whites had a student loan for a child. These differences were not significant. However, there were significant differences in the average amounts borrowed and the proportion of Hispanics and White households with one or more student loans. The average student loan was $5,970 for Hispanics and $10,238 for Whites. About 80% of Hispanics and 65% of Whites had one student loan; thirteen percent of Hispanics and 25% of Whites had two student loans, while 8% of Hispanics and 10% of Whites had three or more student loans. The answer to research question 1 is that Hispanics use student loans at the same rate as Whites but, on average, Hispanics borrow lower amounts. Moreover, these results answer the first part of research question 2, because Hispanics do not acquire student loans for use by others (spouse, children) more than non-Hispanic Whites.

There were significant differences in demographic factors between Hispanics and Whites. Hispanic respondents were younger than White respondents, 45 and 54 years old, respectively. The average household size for Hispanics was 2.7, as compared to 2.2 for Whites. About 24% of Hispanic and White respondents were female. About 56% of Hispanics and 50% of Whites were married. Almost 19% of Hispanics had a college degree, as compared to 41% of Whites. There were also significant differences in financial behavior and financial literacy. About 32% of Hispanics had a financial planning horizon of at least the next few months, as compared to 20% of Whites; 7% of Hispanics and 14% of Whites had a financial planning horizon longer than 10 years. The average self-reported financial literacy score of Hispanics was 6.49, as compared to 7.3 for Whites.

Table 2 shows weighted descriptive statistics for Hispanics based on their level of education. Thirty four percent of Hispanics with at least a college degree have a student loan, compared to 13% of Hispanics without a college degree. Sixty six percent of Hispanics with a college degree had a student loan for themselves, compared to almost 39% without a college degree; about 27% of Hispanics with a college degree and 44% of those without a college degree had a student loan for their spouse; approximately 7% of those with a college degree had a student loan for their child, compared to 18% of those without a college degree. The average loan amount for those with a college degree was $18,566, compared to $3,058 for those without a college degree. These differences were significant and show that, for Hispanics, having student loans for use by others (spouse, children) varies by educational attainment, providing an answer to the second part of research question number two.

There were no significant differences in demographic factors for Hispanics with and without a college degree. There were, however, significant differences in spending behavior and financial literacy. About 21% of Hispanics with a college degree reported spending more than their income, as compared to almost 12% of those without a college degree. Self-reported financial literacy was higher for those with a college degree than for those without a degree, 7.4 and 6.2 respectively.

Descriptive statistics by level of education of White households are presented in Table 3. Fifty six percent of White households with a college degree have one student loan, compared to about 75% without a college degree; thirty percent of Whites with a college degree and about 19% of Whites without a college degree had 2 education loans, while 14% of Whites with a college degree and 6% of Whites without a college degree had three or more student loans. The average student loan amount for those with a college degree was $17,581, as compared to $5,246 without a college degree. All of these differences were statistically significant.

Household size, gender, and marital status were significantly different for White households with and without a college degree. The average size of White households with a college degree was 2.3, as compared to 2.2 for those without a college degree. Almost 79% of respondents with a college degree and 74% without a college degree were male. Fifty eight percent of Whites with a college degree were married, as compared to 45% of those without a college degree.

About 13% of White households with a college degree had a financial planning horizon of a few months, as compared to 24% of those without a degree; about 18% of college graduates and 10% of those without a degree had a financial planning horizon of more than 10 years. Sixty percent of college graduates reported spending less than their income, as compared to 47% of those without a degree. White respondents with a college degree had a higher self-reported financial literacy score, 7.6, as compared to 7.1 for those without a degree.

To answer Research Question 3, the profiles of Hispanics and Whites with three or more student loans to their names were compared. The results are shown in Table 4. The average loan amount for Hispanics with student loans for others was $32,834, compared to $56,906 for Whites. Hispanic respondents with education loans for others had an average income of $90,830, compared to $117,265 for Whites. A larger proportion (80%) of Hispanics without a college degree had student loans for others, compared to 49% of Whites. The financial literacy score for Hispanics was 7.3, compared to 7.4 for Whites. All of these results were significant.

Results with Implications

This was an exploratory study conducted to investigate if Hispanics use student loans at the same rate as Whites. The results of this study show that there is no significant difference in the rate of student loan usage between Hispanic and White households. Contrary to Braga's (2016) findings, there was no statistical difference between the number of loans taken out by Hispanics and Whites for use by spouses or their children. However, there was a significant difference in the proportion of households with one, two, or at least three student loans. Compared to Whites, a larger proportion of Hispanics had one student loan and a lower proportion had three or more loans. This may be due to Hispanics having lower credit scores than Whites thus limiting their access to more loans (Leonhardt, 2021).

This study also investigated if Hispanics acquire student loans for use by others (spouse, children) more than non-Hispanic Whites and if this varies by educational attainment. Although there were no significant differences by race/ethnicity between the use of loans for self and for others, the results of the analyses by race and level of education provide useful information for financial counselors and educators. Compared to those with at least a college degree, a larger proportion of Hispanics without a college degree have student loans for their children. These results are consistent with the decision-making process described by the family systems theory and speak to the collectivism cultural dimension of Hispanics. The family unit makes decisions based on what is best for the family, not for the individual. Hispanic parents without a college degree may be willing to take on a loan for their children to provide an opportunity for a better financial life. But, are parents expecting a financial return on their investment? If they do, is there a family discussion about the parents' financial expectations once the child graduates? These are questions that financial counselors should consider asking their clients because they affect budgets and retirement planning, among others. Intergenerational contracts in the United States and other Western countries traditionally dictate that children grow up, leave the house, and become financially independent. This, however, is not the norm in other cultures. As financial counselors continue to work with families of diverse backgrounds, they should continue to focus on getting to know their clients and understand their values so that these values drive the financial planning process. Moreover, when working with first generation immigrants with children, financial advisors should consider the level of acculturation of the parents as well as the children because they might be different, which might result in different unspoken financial expectations for the family unit. As suggested by Gibson et al. (2021), practitioners should consider inviting all household members to at least an annual meeting, which would help to understand income dynamics and financial expectations within the family members.

Some of the respondents without a college degree have student loans for themselves as well as for their children. These respondents did not complete their college education and therefore are not reaping the benefits of higher income that are usually accompanied by a college degree. Financial counselors should encourage their clients to complete their education and should also provide them with resources to do so. For example, practitioners might consider showing their clients how to research the right adult education program for them, as well as give them the tools to research the potential earnings growth from completing their degree. In addition, to help their clients with children going to college, practitioners should consider building relationships with colleges and community colleges in their area, especially with someone with expertise with first generation college students. One of the main reasons why first-generation college students drop out of college is that they do not know how to navigate higher education and its "hidden curriculum". It would be valuable to provide resources to their clients in this area.

There were no significant differences in the financial planning horizon of Hispanics with and without a college degree. This suggests that financial counselors should continue to emphasize the importance of long-term financial planning to their Hispanic clients, regardless of their level of education.

This study also investigated how the financial behavior of Hispanics with student loans for use by others differ is different to that of their non-Hispanic White counterparts. White and Hispanic households that use student loans for their children or spouse have higher income and borrow a larger amount. Compared to their White counterparts, a larger proportion of Hispanics without a college degree have education loans for others. The financial planning horizon and the spending behavior of Hispanic and White households with student loans for others were not significantly different. This is an area of opportunity for researchers and practitioners to further investigate.

This study has a few limitations. First, there is only one race/ethnicity question in the SCF and it is not possible to separate Hispanics by country of origin or by level of acculturation. Future research about Hispanics and student loan borrowing should account for differences that may arise due to country of origin, time spent in the United States, etc. Second, only the first implicate of the SCF was used for the analysis. Future studies should incorporate the five implicates and multiple imputation models for comparison. Thirdly, the SCF oversamples wealthy households, which may make these results not transferable to financially vulnerable groups. Finally, this study did not take into account the types of education loans held by the households. Future research using this information may contribute to a better understanding of how households make student loan decisions and how they affect their finances.

References

Aguila, E., & Lee, Z. (2022). Work and retirement of older Black and Hispanic Adults (Working Paper MRDRC WP 2022-452) *University of Michigan Retirement and Disability Research Center*. https://mrdrc.isr.umich.edu/publications/papers/pdf/wp452.pdf

Black S. E., Denning, J. T., Dettling, L. J., Goodman, S. & Turner, L. J. (2020). Taking it to the limit: Effects of increased student loan availability on attainment, earnings, and financial well-being (Working Paper 27658, Revised February 2023). *National Bureau of Economic Research.* http://www.nber.org/papers/w27658

Braga, B. (2016). Racial and ethnic differences in family student loan debt. In *Higher Education Policy for Minorities in the United States*. http://hdl.handle.net/10919/96082

Britt, S. L. (2016). The intergenerational transference of money attitudes and behaviors. *The Journal of Consumer Affairs, 50*(3), 539-556. 10.1111/joca.12113

Chan, M., Kwon, J. Nguyen, D. J., Saunders, K. M., Shah, N., & Smith, K. N. (2019). Indebted over time: Racial differences in student borrowing. *Educational Researcher*, 48(8), 558-563. https://doi.org/10.3102/0013189X19864969

Council on Foreign Relations (2022, October 20). Is rising student debt harming the U.S. economy? https://www.cfr.org/backgrounder/us-student-loan-debt-trends-economic-impact

DeVaney, S. A. (1994). The usefulness of financial rations as predictors of household insolvency. *Financial Counseling and Planning*, 5, 5-26.

DeVaney, S. A., & Hanna, S. (1994). The effect of marital status, income, age and other variables on insolvency in the USA. *Journal of Consumer Studies & Home Economics*, *18*(3), 293–303. https://doi.org/10.1111/j.1470-6431.1994.tb00701.x

Espinosa, L.L., Turk, J. M., Taylor, M., & Chessman, H. M. (2019). *Race and ethnicity in higher education: A status report*. American Council on Education. https://vtechworks.lib.vt.edu/handle/10919/89187

Gibson, P., Sam, J. K., & Cheng, Y. (2022). The value of financial education during multiple life stages. *Journal of Financial Counseling and Planning*, 33(1), 24-43. 10.1891/JFCP-20-00017

Hanson, M. (2023). Student loan debt statistics. EducationData.org, April 1, 2023. https://educationdata.org.student-loan-debt-statistics

Hanson, M. (2022). Average student loan debt by year. EducationData.org, April 1, 2023. https://educationdata.org.average-student-loand-debt-by-year

Joo, S. H., & Grable, J. E. (2004). An exploratory framework of the determinants of financial satisfaction. *Journal of Family and Economic Issues*, *25*(1), 25–50.

Kakar, V., Daniels, G. E. Jr., & Petrovska, O. (2019). Does student loan debt contribute to racial wealth gaps? A decomposition analysis. *The Journal of Consumer Affairs*, 53 (4), 1920-1947. https://doi.org/10.1111/joca.12271

Kennickell, A. B. (1998). Multiple imputation in the survey of consumer finances. Washington, DC: Board of Governors of the Federal Reserve System. http://www.federalreserve.gov/econresdata/scf/files/impute98.pdf

Kim, J., Gutter, M. S., and Spangler, T. (2017). Review of family financial decision making: Suggestions for future research and implications for financial education. *Journal of Financial Counseling and Planning, 28*(2), 253-267. DOI: 10.1891/1052-3073.28.2.253.

Leonhardt, M. (2021, Jan28). Black and Hispanic Americans often have lower credit scores – here's why they're hit harder. CNBC. https://www.cnbc.com/2021/01/28/black-and-hispanic-americans-often-have-lower-credit-scores.html

Love, D. A. (2010). The effects of marital status and children on savings and portfolio choice. *The Review of Financial Studies, 23*(1), 385-432. DOI: 10.2139/ssrn.1079552.

Penaloza, L., & Gilly, M. C. (1986). The Hispanic family: Consumer research issues. *Psychology and Marketing*, *3*, 291–304. https://doi.org/10.1002/mar.4220030407

Park, J. M., & DeVaney, S. A. (2007). Examining a model of economic well-being based on financial ratios. *Consumer Interests Annual*, *53*.

Rettig, K. D. (1993). Problem-solving and decision-making as central processes of family life: An ecological framework for family relations and family resource management. *Marriage and Family Review, 18*(3/4), 187-222. DOI: 10.1300/J002v18n03_09.

Rubio, A., Rubio, A., & Moreno, J. F. (2022). Factors associated with financial ratios and financial well-being of Hispanic households: A Comparison with White households. *Journal of Financial Counseling and Planning*, *33*(1), 126-139.

Scholz, J. K., & Seshadri, A. (2007). *Children and household wealth* (Working Paper No. WP2007-158). Ann Arbor, MI: University of Michigan Retirement Research Center. http://dx.doi.org/10.2139/ssrn.1083829

US Census Bureau (2021). Income and Poverty in the United States:2020. https://www.census.gov/library/publications/2021/demo/p60-275.html.

US Census Bureau (2022, February 24). Census Bureau Releases New Educational Attainment Data [Press Release]. https://www.census.gov/newsroom/press-releases/2022/educational-attainment.html.

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Table 1
Weighted Descriptive Statistics by Race/Ethnicity in the 2019 SCF.

Variable	White (n = 4,143)	Hispanic (n = 558)	Significant Difference
Has education loans	20.41%	17.22%	χ^2 =0.1
Number of education loans			χ^2 =6.0*
One	65.2%	79.5%	
Two	25.0%	12.7%	
Three or more	10.2%	7.8%	
The loan(s) are for			χ^2 =1.21
Self	42.0%	48.9%	
Spouse	41.4%	37.3%	
Child	16.6%	13.8%	
Education loans amount	$10,238.1	$5,970.2	F=4.84*
Age	53.6	45.3	F=166.6***
Household size	2.2	2.7	F=56.78***
Income	$116,137.8	$61,047.0	F=5.12*
Gender			χ^2 =6.0*
Male	75.9%	75.7%	
Female	24.1%	24.3%	
Marital Status			χ^2 =33.2***
Married	50.5%	44.1%	
Not married	49.5%	55.9%	
Education			χ^2 =196.1***
No college degree	59.5%	81.2%	
College degree or more	40.5%	18.8%	
Planning horizon			χ^2 =123.3***
Next few months	19.5%	31.9%	
Next year	14.1%	16.2%	
Next few years	27.5%	25.1%	
Next 5-10 years	24.4%	19.9%	
Longer than 10 years	13.5%	6.9%	
Spending behavior			χ^2 =104.9***
More than income	11.7%	20.8%	
Same as income	28.0%	41.4%	
Less than income	60.3%	37.8%	
Financial literacy	7.3	6.5	F=125.9***

Note: Mean for continuous variables; column percentages for categorial variables.
*p<.05, **p<.01, ***p<.001

Table 2
Weighted Descriptive Statistics of Hispanics by Level of Education in the 2019 SCF (n=558).

Variable	No college degree (n=445)	College degree or more (n=113)	Significant Difference
Has education loans	13.3%	34.3%	χ^2 =14.9***
Number of education loans			χ^2 =0.123
One	79.8%	79.1%	
Two	11.6%	14.7%	
Three or more	8.6%	6.2%	
The loan(s) are for			χ^2 =11.5**
Self	38.7%	66.0%	
Spouse	43.5%	26.8%	
Child	17.8%	7.2%	
Education loans amount	$3,057.7	$18,566.0	F=33.1***
Income	$50,627.8	$106,106.4	F=24.1***
Age	44.9	46.7	F=1.72
Household size	2.8	2.6	F=0.41
Gender			χ^2 =1.2
Male	77.4%	68.5%	
Female	22.6%	31.5%	
Marital Status			χ^2 =1.0
Married	56.3%	54.3%	
Not married	43.7%	45.7%	
Planning horizon			χ^2 =5.7
Next few months	33.4%	25.4%	
Next year	15.9%	17.4%	
Next few years	24.2%	28.7%	
Next 5-10 years	19.5%	21.5%	
Longer than 10 years	7.0%	7.0%	
Spending behavior			χ^2 =8.7*
More than income	19.8%	24.8%	
Same as income	44.5%	29.2%	
Less than income	35.7%	46.0%	
Financial literacy	6.2	7.4	F=27.4***

Note: Mean for continuous variables; column percentages for categorial variables.
*p<.05, **p<.01, ***p<.001

Table 3
Weighted Descriptive Statistics of Whites by Level of Education in the 2019 SCF (n=4,143).

Variable	No college degree (n=1,997)	College degree or more (n=2,146)	Significant Difference
Has education loans	16.4%	26.3%	χ^2 =3.0
Number of education loans			χ^2 =24.6***
One	74.8%	56.3%	
Two	18.9%	30.0%	
Three or more	6.3%	13.7%	
The loan(s) are for			χ^2 =7.7*
Self	36.2%	47.4%	
Spouse	46.4%	36.8%	
Child	17.4%	15.8%	
Education loans amount	$5,245.6	$17,580.9	F=33.1***
Income	$72,762.5	$179,932.3	F=17.84***
Age	53.8	53.3	F=1.7
Household size	2.2	2.3	F=29.0***
Gender			χ^2 =55.0***
Male	73.9%	78.8%	
Female	26.1%	21.2%	
Marital Status			χ^2 =191.8***
Married	45.2%	58.4%	
Not married	54.8%	41.6%	
Planning horizon			χ^2 =258.8***
Next few months	23.7%	13.2%	
Next year	16.2%	11.0%	
Next few years	26.8%	28.7%	
Next 5-10 years	22.9%	28.9%	
Longer than 10 years	10.4%	18.2%	
Spending behavior			χ^2 =178.4***
More than income	13.7%	12.7%	
Same as income	39.2%	26.7%	
Less than income	47.1%	60.4%	
Financial literacy	7.1	7.6	F=188.1**

Note: Mean for continuous variables; column percentages for categorial variables.
*p<.05, **p<.01, ***p<.001

Table 4
Weighted Descriptive Statistics of Households with Student Loans for Others by Race in the 2019 SCF (n=).

Variable	White (n=687)	Hispanic (n=95)	Significant Difference
Loans for spouse or child	58.8%	56.7%	χ^2 =0.9
Education loans amount	$56,906.4	$32,834.1	F=10.09**
Income	$117,265.2	$90,829.7	F=4.29*
Age	41.9	39.9	4.06
Household size	3.2	3.4	F=3.24
Gender			χ^2 =0.05
Male	93.2%	95.2%	
Female	6.8%	4.8%	
Marital Status			χ^2 =1.0
Married	73.3%	70.5%	
Not married	26.7%	29.5%	
Education			χ^2 =17.6***
No college degree	49.3%	80.4%	
College degree or more	50.7%	19.6%	
Planning horizon			χ^2 =6.18
Next few months	17.5%	24.2%	
Next year	15.3%	17.8%	
Next few years	29.6%	37.9%	
Next 5-10 years	24.2%	12.4%	
Longer than 10 years	13.4%	7.7%	
Spending behavior			χ^2 =0.45
More than income	15.0%	16.3%	
Same as income	38.2%	34.9%	
Less than income	46.8%	48.8%	
Financial literacy	7.4	7.3	F=5.0*

Note: Mean for continuous variables; column percentages for categorial variables.
*p<.05, **p<.01, ***p<.001

The Strength of Perception of Financial Education Quality on Financial Stress and Anxiety

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Abstract

This paper examined the role financial education plays in financial literacy and financial anxiety/stress. Financial education was explored through two lenses, quantity and quality . The results of the structural equation models suggest that quality financial education is a stronger contributing factor to financial literacy than quantity. Yet, quantity of financial education appeared to alleviate financial anxiety and stress whereas quality financial education increased financial anxiety and stress. The implications of these findings are that financial education programs should strive for quality to ensure financial literacy, however, providing multiple touchpoints for financial education may ensure just-in-time learning and decrease financial stress and anxiety for participants.

Keywords: financial anxiety, financial education, financial literacy, financial stress, financial well-being

Background

Institutions are making efforts to provide financial education in hopes of increasing financial literacy and improving the long-term financial well-being of Americans (Mandell & Klein, 2009; Danes et al.,1999; Varcoe et al. 2005; Durband & Britt, 2012; Bannon et al., 2014). The expectation is that through gains in financial literacy, individuals will demonstrate healthier financial behaviors (Shim et al., 2010). Reports from the FINRA Investor Education Foundation show that more than half (53%) of individuals state that thinking about their finances causes anxiety and 44% say that conversations about finances cause stress (NFCS, 2018). Young adults ages 18-34 report the highest level of financial stress and anxiety, (63%) and (55%) respectively (NFCS, 2018).

The FINRA report provides some optimism that financial education can address these negative financial outcomes. Self-reports of the amount of financial education received and perceptions of the quality of financial education received are linked positively with behaviors which indicate financial capability. Nearly half of the individuals who receive more than 10 hours of financial education report spending less than they earn. Those who rate the quality of their financial education highly are more likely to save. Individuals with more hours or higher quality financial education are also less likely to overdraw their checking accounts, engage in fee-generating credit card behaviors, or use non-bank borrowing methods. Given this premise, this study sought to investigate the relationship between financial education (quality and quantity of financial education) and financial stress and anxiety.

Purpose

Although financial education has been shown to influence normative financial behaviors, there is a shortage of literature comparing the effectiveness of larger amounts of financial education and higher quality financial education to the psychological aspects of financial well-being and decision-making (Altman, 2012). This current study, using the 2018 National Financial Capability Study (NFCS), asks, does quantity or perceived quality have a stronger impact on financial stress and anxiety? This study also employs Structural Equation Modeling (SEM) to test whether financial literacy (as measured by objective financial knowledge, subjective financial knowledge, and financial self-efficacy) mediates these relationships between financial education and financial stress/anxiety. Results of this study have implications for educators and policymakers implementing financial education programs.

Conceptual Background or Theory

Financial socialization is the unconscious or conscious acquisition of financial literacy received by adolescents while growing up in the home (Shim et al., 2010). The knowledge, capabilities, attitudes, and behaviors acquired from financial socialization are both objective and subjective and serve as indicators of long-term financial well- being among young adults (Gudmunson & Danes, 2011). Building on their 2009 Student Financial Well-being Model, Shim et al. (2010) developed a financial socialization model which considered financial learning through two modalities, observational learning and formal learning. Socialization agents such as parents, school, and work are the catalysts by which financial learning occurs.

Although most research has focused on parents and family as the primary sources of financial socialization (Gudmunson & Danes, 2011; Lebaron & Kelley, 2021; Lebaron-Black et al., 2022), a key non-familial source of financial socialization is formal financial education received through classes and workshops (Shim et al., 2010). Formal financial education refers to programs or intervention processes by which individuals improve their understanding of financial concepts and develop financial capability (Jin & Chen, 2020). Evidence exists that high school financial education helps shape young adults' financial literacy, attitudes, and behaviors. There is a positive relationship between students' attending financial education sessions and their objective and subjective financial knowledge (Jin & Chen, 2020; Shim et al., 2010).

The majority of financial socialization literature involving financial education focuses on whether the individual attended any financial education or the number of sessions attended. It is a quantity-based approach rather than a quality-based approach. When quality is mentioned in financial socialization studies, it is referring to quality of relationships. Lebaron and Kelley (2021) put forth a call that policymakers, institutions, and employers should increase the quality of financial education programs to better reach all populations. This study fills this gap by analyzing the relationship between an individual's perception of the quality of the financial education received and objective and subjective measures of financial literacy.

Research Questions

The purpose of this study is to examine the role financial education plays in financial literacy (as measured by objective financial knowledge, subjective financial knowledge, and financial self-efficacy) and financial anxiety/stress. The research questions answered in this paper are:

1) Is the quality of financial education associated with higher levels of financial literacy (e.g., subjective financial knowledge, objective financial knowledge, and financial self-efficacy)?
2) Is the quantity of financial education associated with higher levels of financial literacy?
3) Is quality of financial education more associated with higher levels of financial literacy or quantity of financial education?
4) Does financial literacy mediate the relationship between the quality of financial education and financial stress/anxiety?
5) Does financial literacy mediate the relationship between quantity of financial education and financial stress/anxiety?

Methodology

Data Source

Data for this study came from the FINRA Foundation's 2018 National Financial Capability Study (NFCS) State-by-State Survey. The NFCS is a triennial, online data collection designed to provide information about the financial capability of adults in the United States (U.S.). The survey was administered from June 2018 through October 2018. Originating in 2009, the NFCS provides insight into the financial attitudes, behaviors, experiences, knowledge, and resources that make up the financial capability of U.S. adults. With approximately 500 respondents in each of the 50 states (plus District of Columbia) and oversamples in Oregon and Washington (N=1,250), the NFCS draws data from 27,091 U.S. adults (age 18+) and is weighted to represent the age, education, ethnicity, and gender of the national population. The questions pertaining to the quantity and quality of financial education were not included on the 2021 NFCS survey; therefore, the 2018 NFCS collection was the most recent data to address the research question.

Sample
Respondents who did not receive financial education were excluded from this study, which resulted in a sample size of 4,824. The Full Information Maximum Likelihood (FIML) is then employed to account for missing data.

Analysis
Data was analyzed and coded using R (version 4.2.2). SEM model calculations, including confirmatory analysis, the measurement model, and the full structural model were computed using R. A mediation analysis was carried out to test whether financial literacy mediates the relationship between quality and quantity of financial education (in separate models) and financial stress and anxiety. Bootstrapping is employed with 1,000 iterations to estimate the indirect effect significance.

Dependent Variable
Financial Stress and Anxiety was proxied by three variables measuring finance-related worry, anxiety, and stress. Individuals were asked how strongly they disagree or agree with the following three statements:
1) I worry about running out of money in retirement, 2) Thinking about my personal finances can make me feel anxious, and 3) Discussing my finances can make my heart race or make me feel stressed. Answers ranged from 1 to 7, where 1 = "Strongly Disagree," 7 = "Strongly Agree," and 4 = "Neither Agree nor Disagree".

Independent Variables
Financial Education is the independent variable in the analysis. Specifically, the two variables of interest were measures of quantity of financial education and perception of quality of financial education. The quantity of financial education was measured by the question, "In total, about how many hours of financial education did you receive?" Possible responses were: 1-2 hours, 3-10 hours, more than 10 hours, don't know, and prefer not to say. The perception of the quality of financial education was measured by the question, "Overall, how would you rate the quality of the financial education you received?" Responses ranged from 1 to 7, where 1 is "very low" and 7 is "very high." The quantity and quality of financial education are each measured as single-item constructs.

Mediation Variable
The mediation variable was a measure of financial literacy represented by objective financial knowledge, subjective financial knowledge, and financial self-efficacy in line with Huston's (2010) definition of financial literacy. Objective financial knowledge was a score created from responses to six multiple-choice and true or false questions. Respondents receive one point for each correct answer. Possible scores range from 0 to 6.
Subjective financial knowledge was measured by the question, "On a scale from 1 to 7, where 1 means very low and 7 means very high, how would you assess your overall financial knowledge?" Financial self-efficacy was measured by answers on a scale of 1 ("Strongly Disagree") to 7 ("Strongly Agree") to the statement, "I am good at dealing with day-to-day financial matters, such as checking accounts, credit and debit cards, and tracking expenses."

Covariates
The control variables were race/ethnicity (White, non-White), gender (men, women), marital status (married, unmarried), homeownership (homeowner, nonhomeowner), age (6 categories), and income (8 categories). Control variables were added based on factors found in the literature to consistently relate to financial outcomes and well-being. The full-partial method was used to include the covariates in the model (Little, 2013).

Sample Characteristics
The majority of the sample self-identified as men (58.04%) and White (57.76%). The percentages of married (50.59%) and unmarried (49.41%) respondents were nearly the same. A larger percentage of respondents were homeowners (61.11%) versus not being a homeowner (38.89%). Although skewed towards the younger years, more than 40% of the respondents reported being above age 45. More than 50% of the sample reported incomes greater than $50,000. Nearly 60% of respondents had at least 10 hours of formal financial education and 80% of respondents reported a high to very high perception of the quality of financial education they received. Only 5% of respondents believe their subjective financial knowledge ranks low to very low, while more than 80% of respondents believe their financial self-efficacy is high. When it comes to financial anxiety, stress and worry, the majority (54%) of respondents feel anxious about their finances, 45% report feeling stressed about their finances, and more than 50% worry about their finances. Overall, the majority of respondents report receiving over 10 hours of high-quality financial education and although they feel knowledgeable and believe they are good at managing their finances, they still feel anxiety, stress and worry about their financial lives

Results

This study analyzed two structural models. The first structural model looked at financial literacy mediating the relationship between the quality of financial education and financial stress and anxiety. The second structural model considered financial literacy mediating the relationship between the quantity of financial education and financial stress and anxiety. The structural model results are presented in Figures 1 and 2. In the first model (Figure 1), TLI was 0.864, CFI was 0.881, RMSEA was 0.067, and SRMR was 0.061 which were within acceptable thresholds (Kline, 2016). In the second model (Figure 2), TLI was 0.848 and CFI was 0.860, which were within acceptable thresholds (Kline, 2016). RMSEA was 0.068 and SRMR was 0.060 which were within acceptable thresholds (Little, 2013).

In each model, there were two structural paths. Both paths were significant in each model. In the first model (Figure 1), the path from quality of financial education to financial stress and anxiety was significant, with a standardized coefficient of 0.058 and $p < .01$. This indicates that a change in quality of financial education is associated with a 0.058 change in financial stress and anxiety. Similarly, in the second model (Figure 2), the path from quantity of financial education to financial stress and anxiety was significant, with a standardized coefficient of -0.094 and $p < .001$. This indicates that a change in quantity of financial education is associated with a -0.094 change in financial stress and anxiety. This provides evidence of significant relationships between the quality of financial education and financial stress and anxiety, as well as the quantity of financial education and financial stress and anxiety.

The indirect paths, where financial literacy mediates the relationship between quality of financial education and financial stress and anxiety, as well as the relationship between quantity of financial education and financial stress and anxiety, were all significant. The path from quality of financial education to financial literacy was significant, with a standardized coefficient of 0.588 and $p < .001$. The path from financial literacy to financial stress and anxiety was significant, with a standardized coefficient -0.184 and $p < .01$ (Figure 1). Similarly, the path from quantity of financial education to financial literacy was significant, with a standardized coefficient of 0.170 and $p < .001$. The path from financial literacy to financial stress and anxiety was significant, with a standardized coefficient of -0.163 and $p < .001$ (Figure 2).

Conclusion, Implications, and Limitations

This study addresses the question of the quantity or quality of financial education and its role in financial literacy's relationship to financial stress and anxiety. The findings from this study highlight the importance of quality educational programming over repetition in financial education when it comes to increasing financial literacy. The number of financial education offerings, be it direct or indirect, formal or informal, may matter less than the caliber of the information received, thoughtful consideration of content, and mode of delivery. Therefore, implications arise for educators and policymakers to focus on quality in financial education over quantity, i.e., repetition. Financial educators can improve the quality of financial education in a few ways: provide participants with sound truthful information, present information in simple, non-complex ways, offer participants an understanding of "decision problems" that may arise, help participants develop the means to be better able to process [financial] information, and to minimize processing their time (Altman, 2012).

Systematically, other ways to improve financial education quality include thoughtful consideration of programmatic inputs and resources. Employers can ensure a well-trained workforce through targeted hiring, standardized and comprehensive onboarding, and ongoing professional development for educators or instructors. Britt et al. (2012) suggest consideration for selecting, training, and developing financial education staff, including necessary core competencies, interpersonal skills, training content, format, duration, and presentation methods.

Special attention might be given to tailoring financial education to consumers' interests and competencies. Because people learn differently, financial education should be tailored to different demographics, life stages, and learning styles to be effective (Huston, 2010). Financial planning researchers advocate for more innovation in people- centered approaches to financial education (Stall-Meadows, 2010; White et al., 2021). Educators should be encouraged and incentivized to think outside the box, taking multidisciplinary approaches incorporating personal financial education into existing curricula across disciplines like music education or environmental sustainability.

Since students learn by visual, auditory, written word, or kinesthetic teaching, educators can improve the quality of content by varying the teaching resources, activities, and assignments. Delivering content creatively, such as peer- to-peer learning (Solis, 2018) rather than lecture methods, can also support participants' ability to practice processing financial information.

It is also important to recognize the quality of financial education can be improved through technology. Financial technology (fintech) advances are changing the financial landscape (Lusardi, 2019), making financial education more accessible and relatable, and shifting the way consumers interact with financial markets and make financial decisions. Educators must understand the fintech landscape to better-inform clients; and use technologies that help them better connect with existing and potential clients. Furthermore, Heo et al. (2023) found that individuals with higher financial anxiety will utilize financial technology more often. Thus, leveraging fintech may make the connection between financial education and the decrease in financial stress and anxiety more statistically significant.

Although this study emphasizes the importance of quality financial education as it is a stronger contributing factor to financial literacy (e.g., subjective and objective financial knowledge and financial self-efficacy), the study also highlights that the quality of financial education had a significant pathway to increased financial stress and anxiety. In comparison, the quantity of financial education provides a stronger peace of mind regarding one's money (e.g., a decrease in financial stress and anxiety). Perhaps signing up and attending multiple financial education courses alleviates financial stress and anxiety as it provides a false sense of accomplishment. A metaphorical "checking of the box" regarding financial behaviors. A sense that you are doing the "right thing" when it comes to your finances by just attending the educational course. Another potential hypothesis for why the quantity of financial education was linked to decreased financial stress and anxiety is the concept of "just-in-time" education (McCormick, 2009). This theory posits that financial education needs to occur right before financial decision-making occurs.

Developmentally speaking, teaching elementary school students investment decisions will not be as powerful of an intervention as teaching a twenty-two-year-old who has disposable income to invest (Shim et al., 2010). Perhaps the quantity of financial education highlights that scaffolding of financial education took place over time which helped participants feel less stress and anxiety about their finances as they felt more informed at the appropriate times. Regardless of the reason, further research is needed to explore the contradictory finding that the quantity of financial education improves financial peace of mind while the quality of financial education improves financial literacy. But our finding provides a first step in understanding why prior research has not found that financial education and literacy decrease financial anxiety or stress (Archuleta et al., 2013).

Several limitations should be noted to help improve future research. First, the respondents did not report the specific learning outcomes of the financial education interventions and sources of financial education. Additionally, whether these specific interventions reflect the objective knowledge questions used in this study is unknown. Second, it is now known when the financial education was received, which could impact the respondent's reported financial well- being depending on the timing of attending the intervention. Third, it is unknown which respondents attended required financial education versus those who voluntarily attended a financial education program.

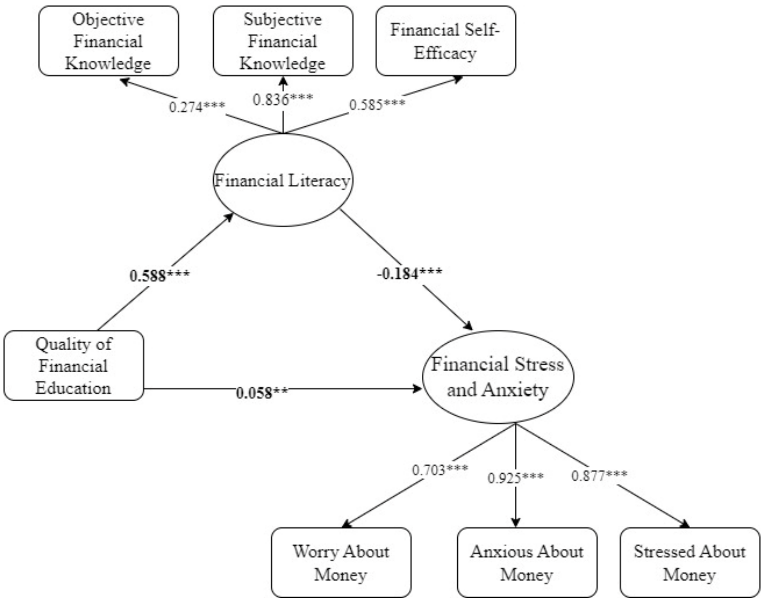
Another important limitation to this study is that our measure of quality of financial education was based on the participants' self-reporting. As aforementioned, prior literature has found that self-reported evaluations of education are marred with biases (e.g., gender, race, ethnicity, and appearance of the educator; Spooren et al., 2013). Future research can improve upon this study by developing stronger assessments for measuring the quality of financial education courses. Last, defining a financial education program's quality is subjective. No agreed-upon method is used to evaluate the quality of a financial education program, which confounds what determines financial education quality. Future research studies should try to account for the specifics of financial education programs, timing, reason for attending, and evaluation methods used to understand the efficacy of the interventions.

Table 1. Descriptive Statistics of Sample (N =4,824)

Variables	%
;ender: Women	
	41.96
Men	58.04

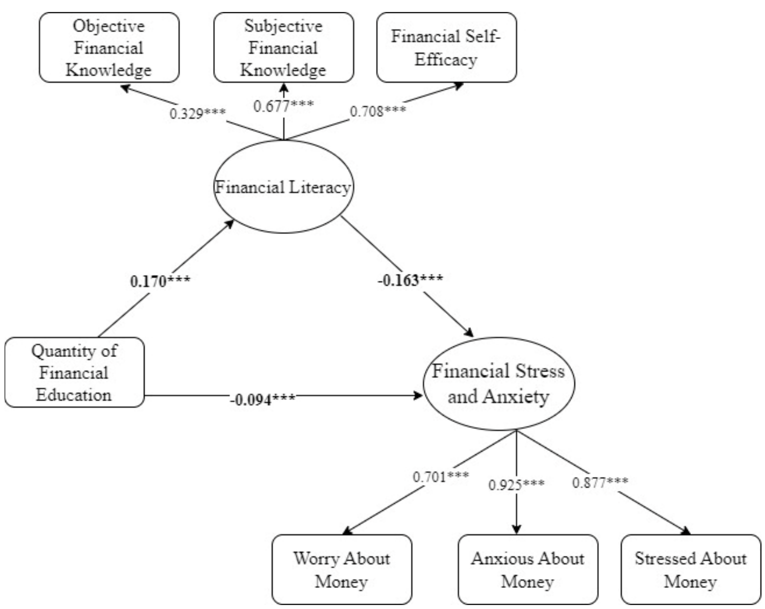
Ethnicity:	
Nonwhite	42.24
White	57.76
Marital Status:	
Married	50.59
Unmarried	49.41
meownership: Homeowner	61.11
Nonhomeowner	38.89
Age	
18 – 24 Years	18.71
25 – 34 Years	23.75
35 – 44 Years	16.95
45 – 54 Years	14.25
55 – 64 Years	13.55
65+ Years	12.79
Income:	
Less than $15,000	10.36
$15,000 - $24,999	8.51
$25,000 - $34,999	9.17
$35,000 - $49,999	14.06
$50,000 - $74,999	17.81
$75,000 - $99,999	16.03
$100,000 - $149,999	15.64
$150,000 +	8.40
Perception of Quality of Financial Education	
1 (Very Low)	1.73
2	1.98
3	5.18
4	12.79
5	26.27
6	23.28
7 (Very High)	28.76
uantity of Financial Education 1 (1 -2 Hours)	12.82
2 (3-10 hours)	27.34
3 (10 hours +)	59.84
ubjective Financial Knowledge 1 (Very Low)	1.18
2	0.92
3	2.86
4	12.29
5	28.32

6	28.59
7 (Very High)	25.82
nancial Self-Efficacy 1 (Strongly Disagree)	2.03
2	2.11
3	3.49
4	9.11
5	12.31
6	21.55
7 (Strongly Agree)	49.41
Financial Anxiety	
1 (Strongly Disagree)	14.12
2	8.06
3	8.52
4	15.24
5	16.02
6	14.77
7 (Strongly Agree)	23.27
Financial Stress	
1 (Strongly Disagree)	18.05
2	10.41
3	9.55
4	17.03
5	14.41
6	11.09
7 (Strongly Agree)	19.45
Financial Worry	
1 (Strongly Disagree)	14.19
2	8.51
3	8.10
4	17.00
5	15.60
6	12.50
7 (Strongly Agree)	24.07



Standardized results are provided. Model fit RMSEA = 0.067 SRMR = 0.061, CFI = 0.881, TLI = 0.864. *** p<0.001.** p<0.01. * p<0.05. *N* = 4,824.

Figure 1. Structural Model Results. Financial Literacy Mediating the Relationship Between the Quality of Financial Education and Financial Stress and Anxiety



Standardized results are provided. Model fit RMSEA = 0.067 SRMR = 0.061, CFI = 0.881, TLI = 0.864. *** p<0.001.** p<0.01. * p<0.05. *N* = 4,824.

Figure 2. Structural Model Results. Financial Literacy Mediating the Relationship Between the Quality of Financial Education and Financial Stress and Anxiety

References

Altman, M. (2012). Implications of behavioural economics for financial literacy and public policy. *The Journal of Socio-Economics*, *41*(5), 677-690. https://doi.org/10.1016/j.socec.2012.06.002

Archuleta, K. L., Dale, A., & Spann, S. M. (2013). College students and financial distress: exploring debt, financial satisfaction, and financial anxiety. *Journal of Financial Counseling and Planning*, *24*(2), 50-62.

Bannon, S., Ford, K., & Meltzer, L. (2014). Financial literacy programs in the workplace. *The CPA Journal, 84*(9), 67.

Britt, S. L., Halley, R. E., & Durband, D. B. (2012). Training and development of financial education program staff. *Student financial literacy: Campus-based program development*, 37-55.

Durband, D. B., & Britt, S. L. (Eds.). (2012). Student financial literacy: Campus-based program development. Springer Science & Business Media.

FINRA Investor Education Foundation (2018). The State of U.S. Financial Capability: The 2018 National Financial Capability Study. https://finrafoundation.org/sites/finrafoundation/files/NFCS-2018-Report-Natl- Findings.pdf

Gudmunson, C. G., & Danes, S. M. (2011). Family financial socialization: Theory and critical review. *Journal of Family and Economic Issues, 32*, 644-667.

Heo, W., Lee, J. M., & Rabbani, A. G. (2021). Mediation effect of financial education between financial stress and use of financial technology. *Journal of Family and Economic Issues*, *42*, 413-428.

Huston, S. J. (2010). Measuring financial literacy. *Journal of consumer affairs, 44*(2), 296-316.

Jin, M., & Chen, Z. (2020). Comparing financial socialization and formal financial education: Building financial capability. *Social Indicators Research, 149*(2), 641-656.

LeBaron-Black, A. B., Curran, M. A., Hill, E. J., Freeh, M. E., Toomey, R. B., & Speirs, K. E. (2022). Parent Financial Socialization Scale: Development and preliminary validation. *Journal of Family Psychology, 36*(6), 943.

LeBaron, A. B., & Kelley, H. H. (2021). Financial socialization: A decade in review. *Journal of Family and Economic Issues, 42*(1), 195-206.

Lusardi, A. (2019). Financial literacy and the need for financial education: evidence and implications. *Swiss Journal of Economics and Statistics, 155*(1), 1-8.

Mandell, L., & Klein, L. S. (2009). The impact of financial literacy education on subsequent financial behavior. *Journal of Financial Counseling and Planning, 20*(1).

McCormick, M. H. (2009). The effectiveness of youth financial education: A review of the literature. *Journal of Financial Counseling and Planning*, *20*(1).

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*, 1457-1470.

Solis, O. J. (2018). Exploring innovative pedagogy to deliver financial education: A peer-to-peer event with students. *American Journal of Business Education*, *11*(4), 63-70.

Spooren, P., Brockx, B., & Mortelmans, D. (2013). On the validity of student evaluation of teaching: The state of the art. *Review of Educational Research*, *83*(4), 598-642.

Stall-Meadows, C. (2010). Weaving Sustainability into Family and Consumer Sciences Education. *Journal of Family & Consumer Sciences Education, 28*(1), 13-22.

Varcoe, K., Martin, A., Devitto, Z., & Go, C. (2005). Using a financial education curriculum for teens. *Journal of Financial Counseling and Planning, 16*(1).

White, K. J., McCoy, M., & Watkins, K. (2021). Resource Management: Environmental Sustainability Across the Financial Literacy Curriculum. *Journal of Family & Consumer Sciences Education, 38*(1), 24-40.

The Financial Anxiety Barbell Curve: How Too Much or Too Little Financial Anxiety Impacts a Client's Trust in and Commitment to Their Planner

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Abstract

The negative impacts of financial anxiety have been well-researched. However, a limited understanding remains on the effects of eustress on financial planning clients. This study examined the relative effects of low, medium, and high financial anxiety on trust and commitment. Results suggest the lowest level of financial anxiety was best for trust and commitment, while the highest levels of financial anxiety are significantly better than medium levels of financial anxiety. These findings challenge the bias that the presence of financial anxiety is inherently bad and bring a new perspective to financial planners who strive to promote clients' behavioral change.

Keywords: commitment, eustress, financial anxiety, psychophysiological, trust

Purpose

Financial anxiety is defined as a physiological response to a financial stressor, such as an overdue bill (Britt et al., 2016; Grable et al., 2015). Recognizing the presence of financial anxiety in clients is an important initial step for financial planners. When a person's physiological arousal is triggered by potential financial threats, such as concerns about their financial future, their systems become overwhelmed by hormones like adrenaline and cortisol. This physiological response hampers higher-level coping mechanisms, impairs logical thinking, and inhibits proactive behaviors (Pittman & Carle, 2015). Research on psychophysiology in financial planning found that high levels of anxiety decrease the client's ability to understand the information presented in session (Grable et al., 2015) and individuals who are experiencing anxiety often resort to avoidance as a defense mechanism (Porges, 2011; Shapiro and Burchell, 2012). Grable et al. (2015) found that financial anxiety also decreases the clients' desire to continue seeing their financial planner. More recently, Machiz et al. (under review) found that the level of financial anxiety both impacted the client's ability to trust their financial planner's recommendation(s) and decreased their ability to commit to their planner fully, showing that anxiety is truly an antecedent to both trust and commitment in the financial planner-client relationship.

Even though high levels of financial anxiety have a negative impact on the financial planning process, some physiological arousal is indeed helpful. Research on psychophysiology in financial planning has found that anxiety levels that are too low inhibit the client's ability to continue seeing their financial planner (Grable et al., 2015). If a person has very low levels of financial anxiety, they may not care enough about their finances to put forth the effort to meet with their planner or to follow through with financial planning recommendations. The current study hypothesizes that too high of anxiety and too low of anxiety will also be detrimental to the financial planning process.

Conceptual Background and Theory

Trust, Commitment, and Their Antecedents

An important theoretical concept guiding this study is Morgan and Hunt's (1994) theory of trust and commitment. Although this theory does not directly address financial anxiety, it does present five important antecedents to building trust and/or commitment with clients. To build a client's trust, a planner should have strong communication abilities and an absence of opportunistic behavior. A client's commitment to the planner relationship is dependent on the costs associated with ending the relationship, as well as what benefits the client perceives they obtain from the relationship.

The antecedent to both trust and commitment is shared values. Planners who gather and integrate information about a client's family, social, cultural, and other values increase both trust and commitment in the relationship (Sharpe et al., 2007). Shared values were the only antecedent to both trust and commitment in Morgan and Hunt's (1994) theory, but there is evidence that anxiety should be considered as an additional antecedent (Machiz et al., under review). In Machiz et al. (under review), the authors determined financial anxiety as an additional antecedent to trust and commitment in the financial planner-client relationship. In financial planning, trust is how much integrity a client believes a planner has (Morgan & Hunt, 1994). The telltale sign of whether a client trusts their financial planner is the extent to the client feels confident in following their planner's advice and implementing their recommendations (Hunt et al., 2012). Communication skills are a critical component of building trust (Sharpe et al., 2007). Communicating includes discussing a variety of financial planning topics, achieving tasks that require communication (like gathering data), and delivering information through verbal, nonverbal, and spatial methods (Sharpe et al., 2007). Planners increase trust when they refrain from engaging in opportunistic or self-serving behavior. For example, planners and clients bond when expectations are met and planners identify advantageous opportunities for their clients (Dubofsky & Sussman, 2010; Morgan & Hunt, 1994).

Clients demonstrate commitment when they are less likely to consider or engage in the search for a new financial planner (Cheng et al., 2017). Commitment is critical for a financial planner's ability to grow and retain their practice. If a client believes the cost of terminating the current relationship is too high, they will be more likely to stay with their current advisor. Planners may find that clients who have more intricate financial plans or complicated situations feel the costs of leaving and establishing a new relationship are too high (Yeske, 2010). Advisors who add value to their clients' life — either through quantitative measures like investment returns and/or qualitative measures such as being a trusted confidante — can also increase commitment (Cummings & James, 2014; Fulk & White, 2018). Clients who perceive these benefits will be less likely to terminate the relationship.

Financial Anxiety and Eustress

Researchers have found a relationship between financial anxiety and financial planning (Lim et al., 2014; Grable et al., 2015). Specifically, too much physiological arousal from financial anxiety impacted a client's intention to set up an appointment with a financial planner (Grable et al., 2015). Working with a financial planner may initially increase financial anxiety, as a client must confront many potential financial stressors in their lives, or the initial meeting itself may cause anxiety (Gerrans & Hershey, 2016). According to Grable et al. (2021), while is often associated with negative outcomes, some stress, such as eustress, can be positive because it creates an encouraging psychological and physiological mental state. Eustress is a term used to describe a positive form of stress and occurs when stressors cause a positive psychological response (such as motivation, excitement, or increased energy; Grable et al., 2021). The distinction between stress and eustress is important as both are subjective and can vary from person to person, depending on their coping mechanisms, personal perceptions, or overall well-being. Research has found that perpetual or prolonged stress can lead to the development of anxiety (e.g., Keles et al., 2020).

Hypotheses

The current study hypothesizes that:

H1: Too high levels of financial anxiety will be detrimental to the financial planning process.
H2: Too low levels of financial anxiety will be detrimental to the financial planning process.

Methodology

Data

The data used for this survey is from the Developing and Maintaining Client Trust and Commitment in a Rapidly Changing Environment Study (2021). This study was conducted in 2021 by the Financial Planning Association® (FPA®), the Kansas State University Personal Financial Planning Program, MQ Research & Education, and Allianz Life Insurance Company of North America (Allianz Life). None of these entities has reviewed or approved of this use. Data collection was completed in two phases to gather information from a convenience sample of financial planners and their clients. Through this process, a total of 435 client surveys were collected. Respondents with infeasible answers (such as age 175) were removed, which resulted in an $n = 426$. Demographic data are summarized in Table 1.

Measures

There were two dependent variables for this study: clients' trust level in their financial planner, and clients' commitment to their financial planner. Trust was measured using a 5-item scale ($\alpha = 0.77$) and commitment was measured using a 6-item scale ($\alpha = 0.73$). Responses to each question were measured with a 5-item Likert-type scale. Higher values indicate higher levels of trust or commitment. Possible scores for trust ranged from 5 to 25 ($M = 16.67$, $SD = 3.97$, $min = 7$, $max = 25$), and for commitment ranged from 6 to 30 ($M = 19.06$, $SD = 4.15$, $min = 9$, $max = 30$).

The independent variable was financial anxiety. There were 7 items on the financial anxiety scale (α = 0.81). Possible responses to each item were measured using a Likert-type scale, with values from 1 to 5. The possible range of values was from 7 to 35 (*M* = 19.26, *SD* = 5.11, *min* = 7, *max* = 35), with higher values indicating higher levels of financial anxiety. Table 2 contains the specific questions and summary data for the variables.

Analysis

Scatterplots were produced to visualize the relationship between financial anxiety and each of the dependent variables. Given the curvilinear patterns, two analytic methods were employed to investigate the relationships. First, analysis of variance (ANOVA) was used to determine the relative levels of trust and commitment for those with low, medium, and high levels of financial anxiety. To classify, scale scores from 7 to 13 were defined as low anxiety, scores of 14 to 26 were defined as medium anxiety, and scores from 27 to 35 were defined as high anxiety. Under this categorization, 15.63% of the respondents were classified as having low financial anxiety, 80.00% medium, and 4.37% high. The second method was ordinary least squares (OLS) regression, using both a linear and quadratic term for financial anxiety.

Results

For trust, the ANOVA model was significant (F = 272.47, p < .001, R^2 = .56). Trust scores were 7.92 points higher for those with low anxiety than those with medium anxiety (*SE* = 0.35, p < .001, *95% CI* = [-8.75, -7.09]). Trust scores for those with medium levels of anxiety were 5.74 points lower than those with high anxiety (*SE* = 0.75, p < .001, *95% CI* = [3.99, 7.49]). This indicates that the high and low anxiety groups score higher than the medium anxiety group on trust. Comparing the low and high groups, those with low anxiety had trust scores 2.18 points higher than those with high anxiety (*SE* = 0.80, p = .018, *95% CI* = [-4.06, -0.30]). OLS results were also significant (F = 326.41, p < .001, R^2 = .60). The linear coefficient was –2.35 (SE = 0.12, p < .001), and the quadratic factor was 0.06 (SE = 0.00, p < .001). This implies the model $\widehat{trust} = 39.87 - 2.74(anxiety) + 0.06(anxiety)^2$. Residuals for the quadratic model do not indicate a pattern, which provides evidence in favor of the efficacy of the quadratic model.

The ANOVA model was also significant for commitment (F = 202.15, p < .001, R^2 = .48). Commitment scores averaged 7.71 points higher for those with low anxiety than those with medium anxiety (*SE* = 0.40, p < .001, *95% CI* = [-8.65, -6.78]). For those with medium levels of anxiety, commitment scores averaged 5.47 points lower than those with high anxiety (*SE* = 0.81, p < .001, *95% CI* = [3.56, 7.38]). As with trust, the high and low anxiety groups score higher than the medium anxiety group on commitment. Comparing the low and high groups, those with low anxiety had commitment scores 2.25 points higher than those with high anxiety (*SE* = 0.87, p = .029, *95% CI* = [-4.30, -0.19]). The OLS model was also significant for commitment (F = 236.10, p < .001, R^2 = .52). The quadratic coefficient was 0.06 (SE = 0.00, p < .001), and the linear coefficient was –2.33 (SE = 0.14, p < .001). The quadratic model for commitment is $\widehat{commitment} = 41.88 - 2.33(anxiety) + 0.06(anxiety)^2$. Like trust, the residuals for commitment did not indicate a pattern, providing evidence in favor of a quadratic model as a descriptor for the data.

The ANOVA models provided evidence that clients with low and high levels of financial anxiety have higher levels of trust and commitment than those with medium levels of financial anxiety. Further, those with low anxiety scores have higher levels of trust and commitment than those with high anxiety scores. The OLS data confirms the ANOVA paradigm of higher scores at the endpoints, as the quadratic models form a convex graph, indicating higher scores for the extremes, and lower scores for the more moderate values of financial anxiety. Both trust and commitment scores have minima when the financial anxiety score is approximately 21.

Discussion

This study addresses two questions pertaining to the relationship a client has with their financial planner. First, is a client's trust in their financial planner related to the client's financial anxiety level? Second, is a client's commitment to their financial planner related to the client's financial anxiety level? It was hypothesized that too high or too low of financial anxiety in a client would result in lower trust and commitment in their financial planners. The results did not support the hypothesis that both anxiety levels being too high or too low are detrimental to the financial planning process. In fact, the results suggested the opposite to be true. Clients with high anxiety and clients with low anxiety were more trusting of their financial planner and more committed to the relationship with their planner. This finding would seem contrary to Grable et al. (2015) who concluded that individuals with too high financial anxiety were the least likely to seek the help of a financial professional.

Although the hypothesis was not supported, the Yerkes-Dodson Law model (1908) provides insight into the findings. The Yerkes-Dodson Law explains that as anxiety increases, performance improves until it reaches an optimal point where further anxiety impairs performance. The law is represented by an inverted U-shaped curve, illustrating that anxiety that is too high or too low is detrimental to performance (Yerkes & Dodson, 1908). Perhaps clients with high financial anxiety rely heavily on their planner, lacking the confidence and/or ability to plan themselves. Similarly, clients with too low financial anxiety tend to delegate all responsibilities to their planner, lacking the desire or motivation to plan for themselves.

Clients in the moderate zone would be more inclined to take the initiative to be somewhat active and attentive to their finances but have low enough anxiety about finances that they would take on some responsibility themselves. These individuals, who represent most cases, are most likely to question their planner and move on if they feel the need to do so. In the context of Yerkes-Dodson, this implies that financial anxiety impacts the client's planning efforts, so that high and low financial anxiety drive clients to rely more on planners, while moderate financial anxiety clients in the optimal anxiety zone are more able to deal with these issues, at least partially, on their own.

Limitations

Despite robust findings, limitations need to be noted including convenience sampling and a small sample size. Future studies with larger sample sizes could increase the generalizability of the results (Brown and Lee, 2019). The high anxiety group was represented by a small number of respondents compared to the low and medium anxiety groups. The sample is not representative among race or ethnicity, and the respondents were selected by their financial planner. Finally, the financial anxiety scale is not diagnostic and requires better validation and reliability, primarily with respect to the cut-off scores for anxious versus not anxious. Other sources of generalized non-financial anxiety, such as those referenced by Archuleta et. al (2013) using the Financial Anxiety Scale (FAS) could be explored further in future research.

Implications

The results from this study bring forth important implications for financial planners. Through understanding that a client's level of trust and commitment is impacted by where they fall on the financial anxiety scale, planners may better predict how their clients react to planning advice. Further, planners should attempt to guide their clients to the lowest level of financial anxiety as it correlates to the highest levels of trust and commitment.

Although low levels financial anxiety clients are very likely to continue through the financial planning process and follow recommendations (Britt et al., 2016; Grable, Heo & Rabbani, 2014), it is still important to continue to have regular conversations with them regarding their needs and wants. By showing clients how their financial behaviors can help them reach their goals or live according to their values, they may become more involved in the financial planning process and feel a greater sense of responsibility for managing their finances. High levels of financial anxiety in clients trust their planner and are committed, but they are more myopic and have lower odds of having an intent to change (Britt et al., 2016), may not fully comprehend financial planning implications (Grable & Britt, 2012), or may already tend to disengage with the planning process (Grable et al., 2014). All these possibilities lead to a potential increase in financial arguments, which has been shown to increase a couple's likelihood of divorce (Britt & Huston, 2012; Dew et al., 2012). While high levels of financial anxiety may cause clients to commit and trust their planner, they may not follow through with financial planning recommendations, and ultimately could be at risk of terminating the relationship.

The most profound finding from the study is that medium levels of financial anxiety are related to clients being the most at risk of being disengaged or wanting to terminate a financial planner-client relationship if things are not going well. Planners who can identify this with their clients would benefit from more regular check-ins, and a softer approach to recommendations especially when a client(s) shows signs of resistance or ambivalence. Traditional approaches like giving more information, using technical language/jargon, forewarnings, trying to foster change, moving too quickly, or over-questioning may lead to more resistance. Instead, try visuals, or open-ended prompts such as "Describe what you are feeling right now with respect to your financial situation" and affirmative statements that acknowledge what the client(s) are doing well at. For example, "Wow! I can see you have put a lot of thought into this…" (Lawson & Klontz, 2017). Another suggestion is to assign tasks rather than homework as the term has a negative connotation to both the client(s) and the planner to help them understand that they are not in the process alone (Datillio, 2009). Planners could also focus on things they and the client can control, such as cash flow, instead of things that they can't, such as market timing, to not be at risk of further diminishing trust and commitment, and ultimately losing the planner-client relationship.

References

Archuleta, K. L., Dale, A., & Spann, S. M. (2013). College students and financial distress: exploring debt, financial satisfaction, and financial anxiety. *Journal of Financial Counseling and Planning*, *24*(2), 50-62.

Britt, S. L., & Huston, S. J. (2012). The role of money arguments in marriage. *Journal of Family and Economic Issues*, *33*, 464-476.

Britt, S. L., Lawson, D. R., & Haselwood, C. A. (2016). A descriptive analysis of physiological stress and readiness to change. *Journal of Financial Planning*, *29*(12), 45-51.

Britt. S. L., Mendiola, M.R., Schink, G.H., Tibbetts, R.H., & Jones, S.H. (2016). Financial stress, coping strategy, and academic achievement of college students. *Journal of Financial Counseling and Planning, 27*(2), 172-183. http://dx.doi.org/10.1891/1052-3073.27.2.172

Brown, T. & Lee, J. (2019). Sample size and generalizability in research. *Journal of Financial Research,* 42(4), 383-392.

Cheng, Y., Browning, C., Gibson, P. (2017). The value of communication in the client-planner relationship. *Journal of Financial Planning, 30*(8), 36-44.

Cummings, B.F. & James III, R. (2014). Factors associated with getting and dropping financial advisors among older adults: Evidence from longitudinal data. *Journal of Financial Counseling and Planning, 25*(2), 129-147.

Dattilio, F. M. (2009). *Cognitive-behavioral therapy with couples and families: A comprehensive guide for clinicians*. Guilford Press.

Dew, J., Britt, S., & Huston, S. (2012). Examining the relationship between financial issues and divorce. *Family Relations*, *61*(4), 615-628.

Dubofsky, D., & Sussman, L. (2009). The changing role of the financial planner part 1: From financial analytics to coaching and life planning. *Journal of Financial Planning, 11*(118), 38–4.

Fulk, M., Watkins, K. Grable, J., & Kruger, M. (2018). Who changes their financial planner? *Journal of Financial Planning, 31*(8), 48-56.

Gerrans, P. & Hershey, D.A. (2017). Financial adviser anxiety, financial literacy, and financial advice seeking. J*ournal of Consumer Affairs*, 51(1), 54-90. https://doi.org/10.1111/joca.12120

Grable, J., Archuleta. K.L, Ford, M.R., Kruger, M., Gale, J., & Goetz, J. (2020). The moderating effect of generalized anxiety and financial knowledge on financial management behavior. *Contemporary Family Theory*, *42*(1), 15-24. https://doi.org/10.1007/s10591-019-09520-x

Grable, J. & Britt, S.L. (2021). Assessing client stress and why it matters to financial advisors. *Journal of Financial Service Professionals*, *66*(2), 39-45.

Grable, J., Heo, W., & Rabbani, A. (2015). Financial anxiety, physiological arousal, and planning intention. *Journal of Financial Therapy*, *5*(2). https://doi.org/10.4148/1944-9771.1083

Hunt, K., Brimble, M., & Freudenberg, B. (2012). Determinants of client-professional relationship quality in the financial planning setting. *SSRN Electronic Journal,* 5(2), 69-99. https://doi.org/10.2139/ssrn.1867907.

Keles, B., McCrae, N., & Grealish, A. (2020). A systematic review: the influence of social media on depression, anxiety and psychological distress in adolescents. International journal of adolescence and youth, 25(1), 79-93.

Lawson, D. & Klontz, B. (2017). Integrating behavioral finance, financial psychology, and financial therapy into the 6-step financial planning process. *Journal of Financial Planning*, 30(7), 48-55.

Lim, H., Heckman, S., Letkiewicz, J., Montalto, C.P. (2014). Financial stress, self-efficacy, and financial help-seeking behavior of college students. *Journal of Financial Counseling and Planning, 25*(2), 148-160.

Machiz, I., McCoy, M., Wu, J. C., Rollins-Koons, A., & White, K. (under review). Anxiety as an antecedent to trust and commitment. *Financial Services Review*.

Morgan, R. & Hunt, S. (1994). The commitment-trust theory of relationship marketing. *Journal of Marketing*, *58*(3), 20-38.

Pittman, C. M. & Karle, E. M. (2015). *Rewire your anxious brain: How to use the neuroscience of fear to end anxiety, panic, and worry*. New Harbinger Publications.

Porges, S. W. (2011). *The polyvagal theory: Neurophysiological foundations of emotions, attachment, communication, and self-regulation (Norton Series on Interpersonal Neurobiology)*. WW Norton & Company.

Shapiro, G. K. & Burchell, B.J. (2021). Measuring financial anxiety. *Journal of Neuroscience, Psychology, and*

Economics, *5*(2), 92-103.
Sharpe, D, Anderson, C., White, A., Galvan, S., & Siesta, M. (2007). Specific elements of communication that affect trust and commitment in the financial planning process. *Journal of Financial Counseling and Planning. 18*(1), 2-17.
Yerkes, R. M., & Dodson, J. D. (1908). The relation of strength of stimulus to rapidity of habit-formation. *Journal of Comparative Neurology and Psychology*, *18*, 459-482.

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Table 1

Client Demographic Data

Question	*N or M*	*% or SD*
Age *	36.53	9.06
Gender		
Female	198	46.15
Male	231	53.85
Sexual Identity / Orientation		
Straight	368	85.98
Other	60	14.02
Relationship Status		
Single	39	9.09
Committed Relationship	390	90.01
Religion		
Christianity	284	66.20
Judaism	40	9.32
Muslim	31	7.23
Other	74	17.25
Religious		
No	74	17.25
Yes	355	82.75
Disabled		
No	399	93.01
Yes	30	6.99
Latinx		
No	333	77.80
Yes	95	22.20
Racial Identity		
White/Caucasian	363	84.81
Black / African American	44	10.28
Other	21	4.91
Education		
High School Diploma or Equivalent	127	29.67
Associate's Degree	143	33.41
Bachelor's Degree	125	29.21
Graduate or Professional Degree	33	7.71
Annual Household Income		
Less than $50,000	16	3.73
$50,000 – $99,999	100	23.31
$100,000 – $149,999	215	50.12
$150,000 – $249,999	83	19.35
$250,000 – $499,999	14	3.26
Greater than $500,000	1	0.23

*N = 429; * Range of ages [22, 74]*

Table 2

Sample Statistics - Survey Questions

Question	*N*	*M*	*SD*	Minimum	Maximum
Financial Anxiety					
I feel anxious about my financial situation	30	.92	.88	1	5
I have difficulty sleeping because of my financial situation	30	.39	.04	1	5
I have difficulty concentrating on my studies or work because of my financial situation	30	.86	.11	1	5
I am irritable because of my financial situation	30	.83	.14	1	5
I have difficulty controlling my worry about my financial situation	30	.68	.07	1	5
My muscles feel tense because of worries about my financial situation	30	.66	.02	1	5
I feel fatigued because I worry about my financial situation	30	.91	.16	1	5
Communications					
My financial planner works hard at asking questions that will encourage me to open up with them	29	.38	.90	1	5
My financial planner paraphrases the factual content of our conversation	28	.32	.95	1	5
My financial planner paraphrases the emotional themes of our planning conversations	28	.44	.81	1	5
My financial planner communicated to me that it is very important to link their financial planning recommendations to my personal goals, needs, and priorities	28	.60	.36	2	7
My financial planner works hard at communicating their recommendations using terms and language that I can easily understand	28	.50	.56	1	7
My financial planner asks me questions to make sure I understand their recommendations	28	.90	.37	2	7
Relationship Commitment					
I am very committed to maintaining a relationship with my financial planner	29	.46	.88	1	5
I intend to stay with my financial planner indefinitely	29	.90	.19	1	5
I have a strong sense of loyalty towards my financial planner	29	.46	.01	1	5
I could be persuaded to transfer to a different financial planner*	29	.87	.08	1	5
My financial planner is my primary financial advisor	29	.11	.01	1	5
I put maximum effort into maintaining my relationship with my current financial planner	29	.25	.14	1	5

Missing data handled by listwise deletion for each question

** = Reverse Coded*

Figure 1
Scatterplot and Fitted Quadratic Curve – Trust

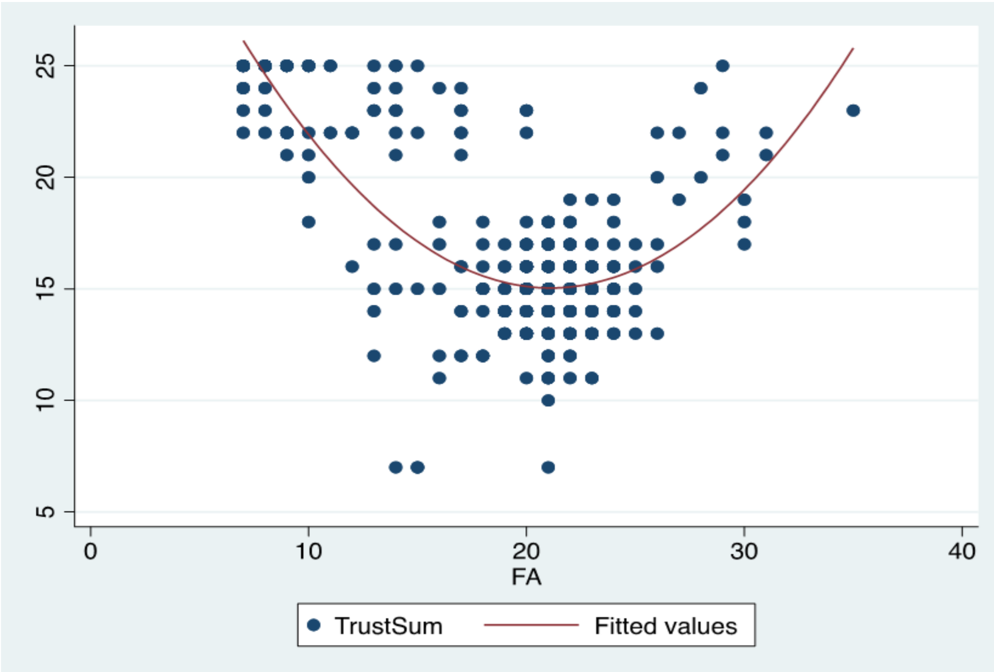
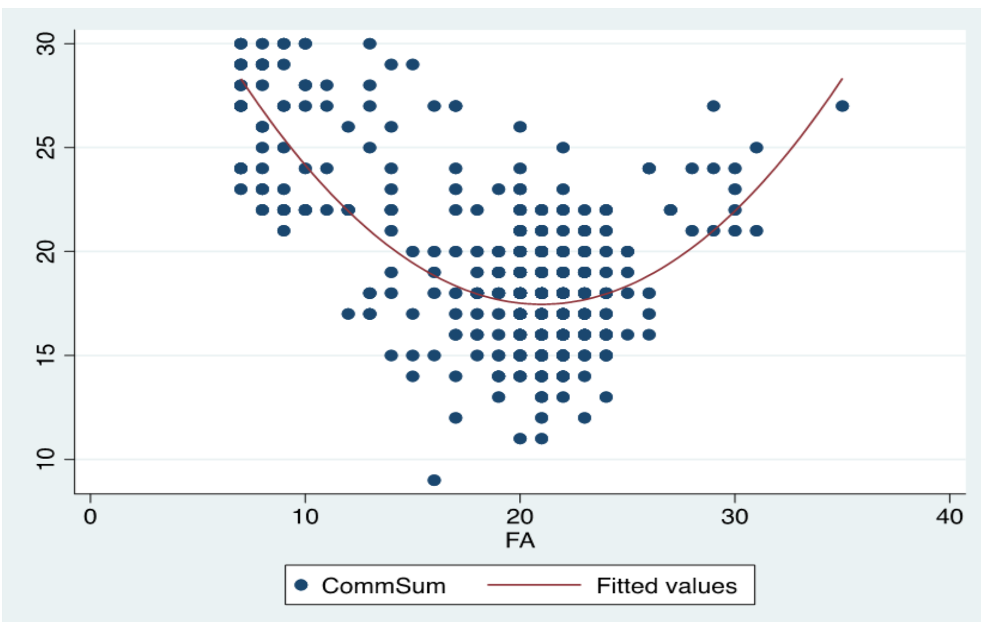


Figure 2
Scatterplot and Fitted Quadratic Curve – Commitment



Financial Independence of College Students

Jing Jian Xiao & Nilton Porto, University of Rhode Island

Abstract

The purposes of this study are to examine financial independence level and motivation of college students and their demand for personal finance topics. With both quantitative and qualitative data collected from online personal finance courses in three semesters in 2022-23 at a northeastern public university, results show that financial independence level and motivation are closely correlated. First generation college students tend to perceive a higher level of financial independence, while juniors tend to rate higher in financial independence motivation than first year students or sophomores. Students at different levels of financial independence show different responsibilities for spending items while their demands for topics in personal finance courses are similar. Qualitative responses of students on financial independence motivation and helpful personal finance topics provide further insights to better understand college students' financial independence. The findings have implications for financial educators in designing and delivering effective personal finance courses for young adults at university and other settings.

Keywords: college students, financial education, financial independence, personal finance

Background and Purpose

For many young adults, attending college is an important period in the lifespan to invest in human capital and become financially independent (Shim et al., 2009; 2010; Xiao et al., 2009). Research on financial independence of young adults examined factors associated with financial independence of young adults including those who had college education or not (Xiao et al., 2014) and if their childhood life experience affects their financial independence (Cui et al., 2019). However, research on financial independence level and motivation of young adults when they are in college is limited.

Personal finance courses are an important channel for young adult college students to learn basic financial knowledge, practice desirable financial behaviors, and gain financial capability when they are in college (Porto & Xiao, 2023). College financial education may help young adults to enhance their financial capability and improve their financial wellbeing (Xiao & O'Neill, 2016; Xiao et al., 2022). The purpose of this study is to better understand if financial independence level and motivation are correlated and if they have differences in terms of student characteristics. Further, we would like to know what personal finance topics are helpful for college students who are at various levels of financial independence. This study used a mixed methods approach that collected both quantitative and qualitative data from online personal finance courses at a northeastern public university to examine if financial independence level and motivation are different in terms of student characteristics and if students at various levels of financial independence demand different personal financial topics. The findings have implications for financial educators when they design and deliver personal finance courses for young adults at university and other settings.

Literature Review, Conceptual Framework, and Research Questions

Literature Review

Becoming financially independent is still one of the hallmarks of adulthood (Mitchell & Lennox, 2020). Young adults often related financial well-being with their own financial independence from their parents (Rea et al., 2019). Previous research has shown that different economic, psychological, and familial factors may all contribute to the path of financial independence of young adults (Xiao et al., 2014). As expected, income and age are both important factors for young adults to become financially independent (Evelyn et al. 2021). This path to financial independence is characterized by four different trajectories: consistently independent (23%), quickly independent (41%), gradually independent (23%), and consistently supported (13%) from ages 18 to 27 (Bea & Yi, 2019).

Historically, young men were likely to be financially independent by their mid-twenties until late on the last century when wage stagnation and cost of living lengthened the path (Sironi & Furstenberg, 2012). Conversely, young women are now becoming financially independent at a faster pace than previous generations (Sironi & Furstenberg, 2012).

Using identity capital theory, Butterbaugh et al (2020) revealed that young adults have been delaying major life decisions due to being less financially independent which also delays adult identity formation. Financial identity formation is a predictor of adult status (Serido et al. 2023). However, only 10% and 22% of emerging adults (ages

18-24) were financially thriving and stable, respectively (Sinha et al., 2018), potentially indicating low financial independence and delayed adulthood.

Family income level during adolescence produces an inverted U‐shape in the financial independence of young adults but the effect disappears after college graduation (Cui et al., 2019). Before college, researchers found that financially independent college students had scored lower in national standardized academic achievement tests than students that received scholarships to attend college (Borgas et al. 2020).

Financial autonomy is another term used to describe the financial independence of young adults. Parental/family financial socialization has been shown to be an important component in improving the financial autonomy of young adults (Gaigaliene & Legenzova, 2019; Vijaykumar 2020). Leaving their home is a sign of financial autonomy and has been associated with higher levels of financial capability of young adults ages 18-25 (Czar et al., 2021).

Being financially independent has positive effects on the individual and society. Financially independent young adults are less likely to commit delinquencies (Hill et al., 2017) and have more economic self-efficacy (Lee & Mortimer, 2009). Financial independence is also associated with a lower likelihood to display minor depressive symptoms (Kirkpatrick Johnson 2013), while still living with parents past the ages of 20 years old leads to lower life satisfaction (Nikolaev 2015).

Conceptual Background and Research Questions

This study used the theory of emerging adulthood (Arnett, 2000) and theory of self-efficacy (Bandura, 1982) to be the conceptual foundation. Based on the theory of emerging adulthood, attending college is an important demographic marker of becoming adults. Subjectively, young people believe they become adults when they are accepting responsibilities for themselves, making independent decisions, and becoming financially independent (Arnett, 2000). According to the theory of self-efficacy, self-percepts of efficacy influence thought patterns, actions, and emotional arousal. Researchers show that in causal tests the higher the level of induced self-efficacy, the higher the performance accomplishments (Bandura, 1982). Applying the theory of self-efficacy to personal finance, Lown (2010) proposed the concept of financial self-efficacy, where people believe they can manage their money effectively. This concept is extended to the concept of financial capability in which people not only believe they are able to manage their finances (perceived financial capability) but also that they can (actual financial capability) (Xiao et al., 2022). Specifically, for people who are financially capable, they possess basic financial knowledge and perform desirable financial behaviors to effectively manage their finances (Xiao et al., 2022).

When young people have opportunities to go to college, they are experiencing a transition time period from financially dependent on their parents to financially independent on themselves (Shim et al., 2009; 2010; Xiao et al., 2009). Among young people entering college, they may have various trajectories toward financial independence. For example, they may be financially independent at the beginning of their college experience or fully financially dependent on their parents. For the first type of students, they may have high cognitive abilities that earn their full scholarships covering their expenses or they may be from low income families that force them to work many hours to support themselves including their educational expenses. For the second type of students, they may be from middle or high income families and go through the transition process step by step, from mainly financially relying on their parents in the first year in college to gradually becoming financially independent at the last year of college by adding more hours to work. Other trajectories may exist too but to our knowledge, no previous research addressed this topic.

At the university setting, personal finance courses are available at many land grant universities including the university where this study took place, but they are not required course for many students (Xiao, 2022). Many students take it for personal purposes. Students who choose to take personal finance courses may be for different reasons. Some students may take it to learn practical knowledge for money management since they are financially independent, and others may take it for planning for the future after graduation when they find a formal, stable job. Students who take personal finance courses at the classroom settings offer unique insights for researchers to better understand how these students perceive their financial independence levels and feel the importance of their financial independence, which is limited in the literature.

In this study, following research questions are asked:

1) What are group differences in financial independence level in terms of a) school year, b) gender, c) grade, d) major, and e) socioeconomic status (SES) proxied by talent development program status (a program for first generation college students)?
2) What are group differences in financial independence motivation in terms of a) school year, b) gender, c) grade, d) major, and e) socioeconomic status (SES) proxied by talent development program status?
3) What is the association between financial independence level and motivation for financial independence?
4) Are there differences in spending items responsible by the students at various levels of financial independence?
5) Are there differences in helpful personal finance topics perceived by the students at various levels of financial independence?

Methodology

Data

Data were collected from student discussion postings during the last week of the semester in an online course of personal finance in three semesters, spring 2022, fall 2022, and spring 2023, at a northeastern public university. The university's IRB approval was obtained before the data collection. The three classes had 102 students combined. Excluding students who missed that week's discussion, the final analyses included 95 observations.

Variables

Four questions about financial independence were asked in the week 12 discussion in each semester. The questions are worded as follows:
Based on the information learned from the whole semester, answer: 1) To what extent you are responsible for your own finance now (0, 50, 90%, or what else of your expenses, income sources should be from your own work, debt, scholarship, or investment); 2) What are you financially responsible now: tuition, book and fees, food, housing, transportation, other spending (specify); 3) How strongly you felt that you need to be financially independent (very strongly, strongly, neutral, weakly, or very weakly) and why; 4) What three topics in this course are most helpful for you to become financially independent and why?

Student responses were collected and coded to the following variables. Question 1 is about financial independence level reported by the students and coded as the percentage of financial independence. Question 2 is about spending items responsible by students, which were coded as a set of binary variables with following categories: tuition, books, food, housing, transportation, and other. Question 3 is about motivation for financial independence, which includes both quantitative and qualitative data. The specific motivation level reported by the students was coded as a continuous variable, ranged from 1 to 5, in which 1 means very weakly and 5 means very strongly to feel she/he needs to be financially independent. Qualitative responses were examined to gain further insights. Question 4 is about topics of this course the students believe that are helpful for their financial independence, which include both quantitative and qualitative data. Topics mentioned by students were coded as a set of binary variables to indicate various personal finance topics such as budgeting, investing, retirement, tax, credit, etc. Qualitative responses of students to this question were examined to gain further insights.

Five student characteristic variables are used in the analyses, including gender (male=1, female=0), school year (freshman, sophomore, junior, senior, graduate student), major (business/economics=1, other=0), if in talent development program (a university program for first generation college students, a dummy variable), and final grade (actual percentage score).

Analyses

Univariate analyses were conducted for descriptive statistics of the sample and key variables. A set of one-way ANOVAs were conducted to answer research question 1 and 2. A correlation analysis was used to answer research question 3. A set of Chi-Square tests were used to answer research question 4-5. Qualitative data were examined to provide further insights for research question 3 and 5.

Results

Descriptive Statistics of the Sample

Table 1 presents descriptive statistics of the sample. Among 95 students included in the analyses, most of them were females (75%), seniors (51.6%), and performed well in the course (52.6% received A- or A). A portion of the students were business majors (12.6%) or in the talent development program (15.8%).

Figure 1 presents the distribution of financial independence level where the mean value was 55.46% out of 100% (SD=30.19, N=91). The distribution is close to a normal distribution except for that a portion of students (14.3%) reported 100% financial independence. Figure 2 presents the distribution of financial independence motivation, where the mean value was 4.15 out of 5 (SD=1.13, N=81), with a distribution skewed to right, in which most students (49.4% or 32.1%) reported very strongly or strongly feeling that they need to be financially independent.

Group Differences in Financial Independence Level and Motivation
Table 2 presents group differences in financial independence level and motivation. Based on a set of one-way ANOVAs, only two statistically significant differences were found. Students who were in the talent development program tended to report a higher level of financial independence than those who were not in the program (76.1% vs. 51.7%). College juniors were more likely to feel that they need to be financially independent than their freshman or sophomore counterparts (4.6 vs. 3.5).

Correlations between Financial Independence Perception and Motivation
A correlation analysis showed that financial independence level and motivation were correlated significantly ($r=.455$, $p<.001$).

Table 1 Descriptive Statistics of the Sample

Variable	Attribute	Frequency	%
Gender	female	75	78.9
	male	20	21.1
School year	First year	1	1.1
	Sophomore	12	12.6
	Junior	28	29.5
	Senior	49	51.6
	Graduate	5	5.3
Grade	70% or lower	14	14.7
	80-89%	31	32.6
	90% or higher	50	52.6
Talent development	no	80	84.2
	yes	15	15.8
Business major	no	83	87.4
	yes	12	12.6
Total		95	100.0

Figure 1 Frequencies of Financial Independence Levels

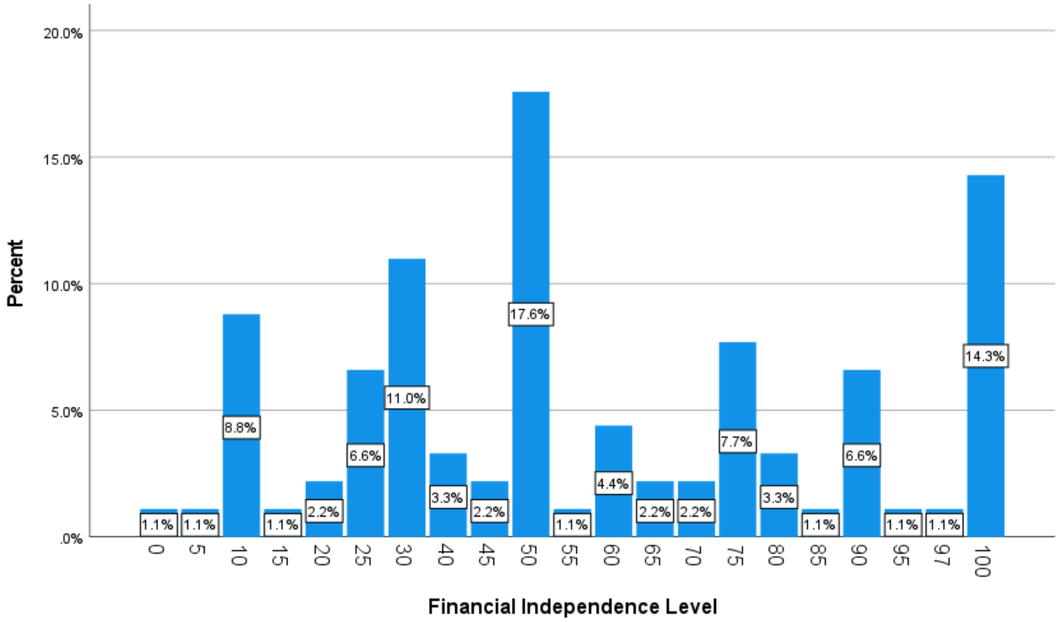


Figure 2 Frequencies of Financial Independence Motivation

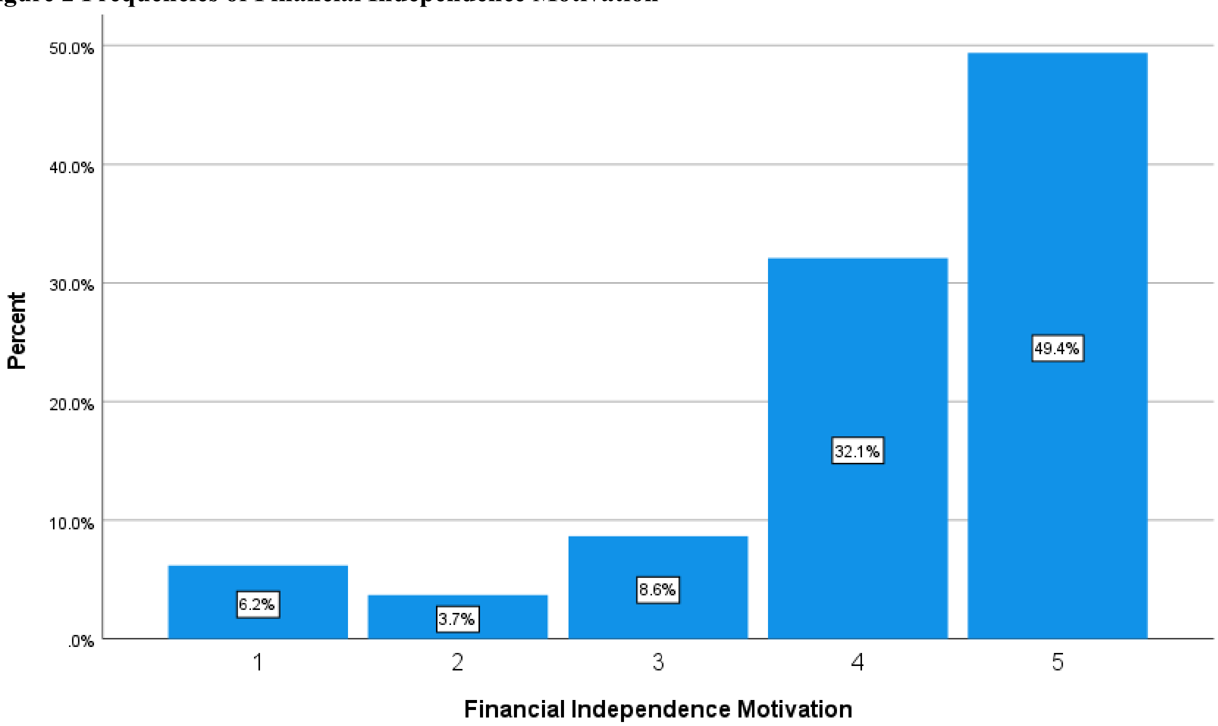


Table 2 Group Differences in Financial Independence Levels and Motivations

	Financial independence (0-100%)	Financial independence motivation (1-5)
Total sample	55.5%	4.2
Gender		
Female	55.0%	4.1
Male	57.0%	4.3
School year		
Freshman/sophomore	54.6%	3.5[2]
Junior	62.9%	4.6
Senior/graduate student	51.6%	4.1
Grade		
70% or lower	67.7%	4.5
80-89%	57.2%	3.8
90% or higher	51.2%	4.2
Talent Development		
No	51.7%[1]	4.1
Yes	76.1%	4.6
Business Major		
No	54.7%	4.2
Yes	60.8%	3.7

Note. Based on one-way ANOVA, 1) Financial independence is different in terms of talent development status; 2) Financial independence motivations are different between freshman/sophomores and juniors. No other group differences are found.

Table 3 Responsible Items by Financial Independence (FI) Levels

	Total Sample	Low FI	Middle FI	High FI
Tuition	33.7	0.0	30.0	68.8*
Books	56.8	27.6	56.7	84.4*
Food	70.5	62.1	63.3	84.4
Housing	28.4	6.9	10.0	62.5*
Transportation	85.3	65.5	90.0	100.0*
Other	93.7	93.1	86.7	100.0
Sample size	*95*	*29*	*30*	*32*

Note. The low FI scores ranged 0-30%, middle FI scores ranged 31-70%, and high FI scores ranged 71-100%. Except for sample size, numbers in the table refer to percentages. For example, among the total sample, 76.8% of students reported budgeting is a helpful topic for financial independence. Since four students missed the answers for financial independence, the financial independence subsamples are based on 91 observations.
* Based on a series of Chi-square tests of financially responsible items by financial independence levels, the following items show statistical differences at significance level of 5%: tuition, books, housing, and transportation.

Table 4 Topics Helpful for Financial Independence (FI)

	Total Sample	Low FI	Middle FI	High FI
Budgeting	76.8	79.3	83.3	65.6
Investment	62.1	58.6	66.7	62.5
Retirement	37.9	44.8	23.3	46.9
Tax	32.6	17.2	43.3	40.6
Credit	29.5	31.0	23.3	31.3
Financial planning	11.6	20.7	3.3	12.5
Auto & housing decisions	7.4	13.8	6.7	3.1
Saving for distant goals	5.3	3.4	10.0	3.1
Insurance	5.3	3.4	6.7	3.1
Saving for emergency	4.2	6.9	3.3	3.1
Job benefits	3.2	3.4	3.3	3.1
Housing	3.2		6.7	3.1
Auto insurance	2.1		3.3	3.1
Cash management	1.1		3.3	
Estate planning	1.1			3.1
Financial statement	1.1			3.1
Sample size	*95*	*29*	*30*	*32*

Note. The low FI scores ranged 0-30%, middle FI scores ranged 31-70%, and high FI scores ranged 71-100%. Except for sample size, numbers in the table refer to percentages. For example, among the total sample, 76.8% of students reported budgeting is a helpful topic for financial independence. A set of Chi-square tests were conducted among five frequently mentioned topics (Budgeting, investment, retirement, tax, and credit) by financial independence levels and no statistical differences are found.

Financially Responsible Items by Financial Independence Levels

Table 3 presents financially responsible items by financial independence levels. For the whole sample, 33.7% reported they were responsible for tuition, 56.8% for books, 70.5% for food, 28.4% for housing (rents, utilities), 85.3% for transportation (gas, car insurance), and 93.7% for other items (entertainment, closing, social, etc.). Among these items, tuition, books, housing, and transportation showed group differences based on a set of Chi-Square tests. For example, in the low financial independence group, no one was responsible for tuition, but in the high financial independence group, 68.8% were responsible for tuition. Similar differences were found for books, housing, and transportation in terms of financial independence level. For the other two categories of food and other, no group differences were found.

Helpful Personal Finance Topics by Financial Independence Levels

Table 4 presents personal finance topics students mentioned that were helpful for achieving their financial independence. The five most frequently mentioned topics are budgeting (76.8%), investment (62.1%), retirement (37.9%), tax (32.6%), and credit (29.5%). A set of Chi-square tests were conducted between personal finance topics and financial independence levels and no differences were found, implying across all financial independence levels, these topics were perceived helpful for their financial independence.

Qualitative Responses on Financial Independence Motivation

Students provided reasons why they rated their motivation for financial independence (FI) in the way they rated. It will be interesting to see how students responded to this question when their financial independence levels are different. Among students who rated low in financial independence motivation, major reasons included: *still in college, need to focus on study, still live with parents,* and *still rely on parents for support,* etc. The following is a quote from such a student:

I personally feel that I am not yet ready to be financially independent. I am only a sophomore in college and I plan on living at home for a couple of years after I graduate, as I need to save money to be on my own. (Student 120, female, low FI level, low FI motivation)

Among students who rated high in financial independence motivation, major reasons included: *always work since my parents cannot support me, hate relying on parents, need to take control of own life, see me as an adult, have real freedom, have a family to raise*, etc. The following is a quote from such a student:

I feel very strongly about my need to be financially independent. After taking this course it has truly opened my eyes on what type of financial planning I need to be aware of and think about for my future. At this time in my life I *currently think about how financially stable I need to be for a college student, but this class has taught me what being financially does truly mean and what steps I need to take to meet my goals.* (Student 303, male, low FI level, high FI motivation)

Qualitative Responses on Personal Finance Topics

Even when students reported different financial independence levels, the reasons they provided for personal finance topics are similar. It would be interesting to compare reasons provided by students who are at various levels of financial independence. The following are some quotes from students who are at low and high levels of financial independence regarding the five most frequently mentioned topics:

Budgeting

One topic in this course that is most helpful for me to become financially independent is budgeting and cash management. I believe that this topic will help me to become financially independent because when I get a full time job and move out to live by myself, I will need to budget my money to make sure that I am not overspending, and that I am budgeting the money towards my basic needs such as food, rent, gas, etc. (Student 307, female, low FI level)

I had an idea how to budget at the beginning of this course but I did not realize how much I was spending and how I can save. I did not know how to do my own taxes, but will need to do this every year and now I can with the topic knowledge of tax planning. (Student 128, female, high FI level)

Investing

I've always been interested in investing but very scared of it because I wasn't educated enough. However, this course has taught me a lot about the different investment types and helped me think about which ones are the best for me. (Student 108, female, low FI level)

For investments, I felt this was helpful because I had no idea I could invest with a modest income. I legitimately thought this was exclusive to extremely wealthy people, and I could have been using investments to increase my savings. (Student 214, female, high FI level)

Retirement

The knowledge I have learned regarding retirement plans and the benefits and disadvantages involved will allow me to carefully weigh my options when choosing my first fulltime job. I will also be able to inform my parents with advice or knowledge of their current retirement plans or benefits they should be looking for and ways to increase their retirement income streams to gradually retire comfortably. (Student 215, female, low FI level)

For retirement planning, it was because I did not recognize how devastating it would be for me to continue to put off retirement contributions. I feel confident now that I am equipped with knowledge of different IRA accounts and the ways to save on taxes.

(Student 214, female, high FI level)

Tax

Tax planning is the first topic that I found very important this semester as it helped to teach me how to file my taxes on my own for the first time and will allow me to take the most advantage of deductions. (Student 328, male, low FI level)

The second topic that helped me was tax planning, since everyone does taxes but I never understood how to or the process that goes into doing them. I learned about the requirements needed and how a small detail in your life can impact how much you get in return or how much you owe. I usually just pay someone to do my taxes and that's it but this chapter made me understand the importance of knowing how to do your taxes and I would soon like to do my own, so I don't have to worry about getting scammed or having to waste that extra money. (Student 113, male, high FI level)

Credit

Learning about how to manage credit is important for when I become financially independent because I may encounter large purchases that require me to use credit rather than paying up front. By learning the factors of creditworthiness, credit scores, use of consumer credit and strategies to reduce debt, I can make smarter financial decisions that prevent me from being overwhelmed with too much debt and not enough money to pay it off. (Student 314, female, low FI level)

Another helpful topic is managing credit. I enjoyed learning about that because I will have multiple credit cards for business expenses so keeping track of all the different lines of credit I will have is super important. (Student 130, male, high FI level)

For students at the low levels of financial independence, learning more knowledge may help them think about their finances in the future. For students at the high level of financial independence, some financial knowledge may be helpful for them to use now. Information collected from qualitative responses can be informative for instructors to better understand what students perceive these topics and what they need to learn based on their current financial independence levels.

Discussion, Limitations, and Implications

Discussion

This study collected both quantitative and qualitative data from class discussions regarding financial independence among college students at a northeastern public university. The results show that among college students, financial independence level and motivation are correlated significantly. First generation college students are likely to report higher levels of financial independence than other students. Juniors tend to score higher in financial independence motivation than first year students and sophomores. Spending items responsible by students are different by financial independence levels but personal finance topics that are helpful for financial independence perceived by the students do not show differences in terms of financial independence levels.

The results suggest that trajectories toward financial independence among college students may be diverse. It seems that students from families at low socioeconomic statuses (those in the talent development program in this study) are more likely to be financially independent, which implies that they need to work more hours during attending college that may affect their investment in human capital in college (shorter learning hours) and their future earning potential. Some students may choose to keep a lower level of financial independence during college and spend more times for studying to accumulate more human capital in college to gain higher earning potential after graduation, especially for those who plan to go to graduate school.

The findings suggest that there are two groups of students who may be interested in personal finance courses when they are not required by their majors. One group may be fully or close to fully financially independent that need practical knowledge to help them manage their finances now. The other group may include students who are at the low level of financial independence but would like to plan ahead and learn basic personal financial knowledge to deal with financially independent life after graduation with a formal, stable job in their professional field.

Limitations

This study is an exploratory one on financial independence of college students. The data collection approach is unique, which has both the advantage and disadvantage. The advantage is to collect data in a naturally way (part of class discussions) that may observe students' actual behavior. The disadvantage is that the coding of quantitative data is less convenient since it needs to be done manually and some students may miss the quantitative answer for specific financial independence level or motivation questions. To overcome this limitation, future research needs to design a structured survey and apply the survey to a large sample of students such as a representative sample of one or multiple universities. Researchers with similar interests at different universities may be recruited to conduct the research jointly. For qualitative data, the coding reported in this study is considered preliminary, more sophisticated coding approaches need to be used in further analyses. The findings of this study provided a foundation for future research to better understand financial independence of college students at the university setting.

Implications

Findings of this study have implications for financial educators who teach personal finance to young adults at the university and other similar settings.

Better understand student demand for personal finance topics. This study does not show group differences in personal finance topics mentioned by students at different levels of financial independence. Then the topic design for a course may be uniform for classes with students at different levels of financial independence. However, educators may also understand that learning needs of students at various levels of financial independence may be different and then different teaching strategies may be offered to them.

Meet needs of students who have diverse family backgrounds. The findings of this study suggest that students from disadvantaged backgrounds such as students in the talent development program are more likely to report financially independent, which implies that they may work more hours and then have fewer hours for study. They may need special learning strategies to help them learn topics that may be challenging for them such as tax calculations and retirement planning.

Encourage learning by raising their motivations. This study shows that financial independence motivation is closely related to financial independence level. When students are in a later school year, they are closer to their graduation to become financially independent. Then they should be motivated to be financially independent and learn relevant financial knowledge to better prepare for the future life. Some topics are currently useful for all students such as budgeting and other topics may need to be learned through case studies since they will not happen until the students become financially independent such as investment and retirement planning. For students with higher levels of financial independence, some knowledge may be useful right away such as budgeting and tax calculation. For students at a lower level of financial independence, many topics may be taught through case studies and provide them opportunities to do exercises to prepare for their future money management after they become financially independent.

References

Arnett, J. J. (2000). Emerging adulthood: A theory of development from the late teens through the twenties. *American psychologist*, *55*(5), 469-480.

Bandura, A. (1982). Self-efficacy mechanism in human agency. *American psychologist*, *37*(2), 122-147.

Bea, M. D., & Yi, Y. (2019). Leaving the financial nest: Connecting young adults' financial independence to financial security. *Journal of Marriage and Family*, *81*(2), 397-414.

Borjas, M. P., Ricardo, C., Escalante-Barrios, E. L., Valencia, J., & Aparicio, J. (2020). Financial independence and academic achievement: are there key factors of transition to adulthood for young higher education students in Colombia?. *Frontiers in Psychology*, *11*, 1330.

Butterbaugh, S. M., Ross, D. B., & Campbell, A. (2020). My money and me: Attaining financial independence in emerging adulthood through a conceptual model of identity capital theory. *Contemporary Family Therapy*, *42*(1), 33-45.

Cui, X., Xiao, J. J., Yi, J., Porto, N., & Cai, Y. (2019). Impact of family income in early life on financial independence of young adults: Evidence from a matched panel data. *International Journal of Consumer Studies, 43,* 514-527.

Czar, K., Gilbert, A., & Scott, A. (2021). Life lessons: Leaving home and financial capability of young adults. *Journal of Consumer Affairs*, *55*(2), 556-579.

Evelyn, E., Ricky, R., & Tanoto, S. R. (2021). Factors Influencing The Financial Independence of Young Adults, an Evidence from Indonesia. *Petra International Journal of Business Studies*, *4*(2), 182-192.

Gaigaliene, A., & Legenzova, R. (2019). Insights on financial autonomy of Lithuanian high school students. *Economic and Social Development: Book of Proceedings*, 304-315.

Hill, J. M., van der Geest, V. R., & Blokland, A. A. (2017). Leaving the bank of mum and dad: Financial independence and delinquency desistance in emerging adulthood. *Journal of Developmental and Life-Course Criminology*, *3*(4), 419-439.

Kirkpatrick Johnson, M. (2013). Parental financial assistance and young adults' relationships with parents and well‐being. *Journal of Marriage and Family*, *75*(3), 713-733.

Lee, J. C., & Mortimer, J. T. (2009). Family socialization, economic self-efficacy, and the attainment of financial independence in early adulthood. *Longitudinal and life course studies*, *1*(1), 45.

Mitchell, B. A., & Lennox, R. (2020). "You Gotta Be Able to Pay Your Own Way": Canadian News Media Discourse and Young Adults' Subjectivities of "Successful" Adulting. *Canadian Journal of Sociology*, *45*(3), 213-238.

Lown, J. M. (2011). Development and validation of a financial self-efficacy scale. *Journal of Financial Counseling and Planning*, *22*(2), 54-63.

Nikolaev, B. (2015). Living with mom and dad and loving it… or are you?. *Journal of Economic Psychology*, *51*, 199-209.

Porto, N., & Xiao, J. J. (2023). Life skills: Online financial literacy to college students during the COVID-19 pandemic. In J. Blair & M. Robles (eds.). *Effective methods for teaching business related topics during and post crisis.* National Business Education Association.

Rea, J. K., Danes, S. M., Serido, J., Borden, L. M., & Shim, S. (2019). "Being able to support yourself": Young adults' meaning of financial well-being through family financial socialization. *Journal of Family and Economic Issues*, *40*, 250-268.

Serido, J., Sorgente, A., Lanz, M., & Shim, S. (2022). Becoming self-sufficient: a longitudinal person-centered analysis of financial identity and adult status during emerging adulthood. *Applied Developmental Science*, 1-16.

Shim, S., Barber, B., Card, N., 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, 1457–1470.

Shim, S., Xiao, J. J., Barber, B., & Lyons, A. (2009). Pathway to life success: A conceptual model of financial well-being for young adults. *Journal of Applied Developmental Psychology, 30,* 708-723.

Sinha, G., Tan, K., & Zhan, M. (2018). Patterns of financial attributes and behaviors of emerging adults in the United States. *Children and Youth Services Review*, *93*, 178-185.

Sironi, M., & Furstenberg, F. F. (2012). Trends in the economic independence of young adults in the United States: 1973–2007. *Population and Development Review*, *38*(4), 609-630.

Vijaykumar, J. H. (2022). The Association of Financial Socialization with Financial Self-Efficacy and Autonomy: A Study of Young Students in India. *Journal of Family and Economic Issues*, *43*(2), 397-414.

Xiao, J. J. (2022). Personal finance research: An editor's perspective. In J. Grable & S. Chatterjee (eds.) (pp. 585-598). *De Gruyter handbook of personal finance.* De Gruyter.

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., Chatterjee, S., & Kim, J. (2014). Factors associated with financial independence of young adults. *International Journal of Consumer Studies, 38,* 394-403.

Xiao, J. J., Chen, C., & Chen, F. (2014). Consumer financial capability and financial satisfaction. *Social Indicators Research, 118*(1), 415-432.

Xiao, J. J., Huang, J., Goyal, K., & Kumar, S. (2022). Financial capability: A systematic conceptual review, extension, and synthesis. *International Journal of Bank Marketing, 40*(7), 1680-1717. https://doi.org/10.1108/IJBM-05-2022-0185

Xiao, J. J., Tang, C., & Shim, S. (2009). Acting for happiness: Financial behavior and life satisfaction of college students. *Social Indicator Research, 92*(1)*,* 53-68.

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