NC_temp2172: Household financial and health decision-making under economic uncertainties

https://www.nimss.org/projects/18981

Statement of Issue(s) and Justification

The connections between financial well-being and health are many and varied. Households often make healthcare decisions based on their financial resources. At the same time, the health status of individual family members can affect the household's financial well-being. Families are increasingly challenged by economic uncertainties that result from climate change, the realities of an unstable global marketplace, and changing domestic policies. In addition, financial capability, access to quality affordable healthcare, and inequality influence household decision-making and ultimately their health and well-being.

There is a pressing need to understand family and consumer financial and health decision-making under this economic uncertainty. Tradeoffs between the human capital of health and financial capital happen daily as households manage their resources.

The Need and Importance of the Work

The National Endowment for Financial Education (NEFE) provides leadership, research, and collaboration to advance financial well-being. While not intended as a research model, the NEFE Personal Finance Ecosystem is a research-informed framework that researchers can use to conceptualize the foundations that underlie an individual's state of financial well-being as well as to test relationships and pathways throughout the framework (NEFE, n.d.). A visual representation of the Ecosystem is available at https://www.nefe.org/initiatives/ecosystem/ The Ecosystem includes the core concepts of foundational factors (general skills and competencies, values and beliefs, family and culture, socioeconomics and geography), financial knowledge and access (financial knowledge, financial skills, access and inclusion), and financial actions and outcomes (mindset and available choice set, decisions and actions, resulting outcomes). Financial well-being is at the center of this ecosystem. It is unique to each individual and fluctuates over time. As NEFE envisions it, financial well-being typically includes satisfactorily managing one's current financial situation, the ability to exercise choice and feel in control of finances, and the outlook for future prospects. With its emphasis on understanding the financial and health decision-making processes of individuals and families, the proposed project can contribute to NEFE's goal of understanding the financial ecosystem and improving it.

The Extension Committee on Policy (ECOP), the representative leadership and governing body of the Cooperative Extension System, has identified health and well-being as an important advocacy topic (https://advocacy.extension.org/#advocacy-topics). Burton et al. (2021) point to climate change and health insurance as two examples of societal and environmental influences affecting how people live their lives and ultimately their well-being. In describing well-being, they state that well-being includes "how satisfied people are with their lives as a whole, the sense of control they have over their lives, and their sense of purpose in life....being accepted into and belonging to a community, providing and receiving support from others, and....creating equitable opportunities for people to thrive in every aspect of life and to create meaningful

futures" (p. 4). To attain well-being, families and consumers are faced with complex decisions that often impact both their finances and their health. In the 2021 Extension Framework for Health and Well-being, Burton et al. distinguish between root causes of structural inequality; norms, practices, and policies; and social determinants of health. Among the roles the model tasks Cooperative Extension with is identifying health inequities existing in a given community and then promoting healthy behaviors through communication and education. Burton et al. make several recommendations that should be addressed to achieve the framework's goals. With the emphasis on financial and health decisions and well-being, the objectives of the proposed project firmly support Recommendation 4.3, "Establish and strengthen relationships...to foster interdisciplinary and collaborative health-related research, teaching and community engagement" (p. 16).

This project builds on the work of previous projects that focused on the complex nature of saving (2008-2013), financial decision-making and information management across the lifespan (2013-2018), and the intersection of healthcare and financial decision-making across the lifespan (2018-2023). A unifying theme running through this work has been the application of a behavioral economics framework.

When a household manages its resources, there is a tradeoff between the human capital of health and the financial capital of the household. In a household economics framework, health is produced with inputs of market goods and services, and it also determines the amount of time available for market and nonmarket production (Anderson & Grossman, 2009). This project will examine factors contributing to household financial and/or health decisions and well-being and assess the role of financial capability, access to quality healthcare, and inequalities on household decision-making and well-being.

Building upon what we have learned over the past 15 years, and continuing to apply the framework of behavioral economics, this new research fills an important gap in understanding the impact of economic uncertainties on financial and health decision-making processes and outcomes. This project is also important for its continued potential contribution to the field of family and consumer economics. The research is informed by the latest advancements in behavioral economic theories and has the potential to improve the overall well-being of American households. The findings of this research are expected to inform both practice and policy making to improve household well-being.

Technical Feasibility

One of the benefits of conducting research as a multi-state team is the ability to access the resources, skills, talents, and diverse experiences of project participants toward the accomplishment of a goal that is greater than the theoretical sum of its parts. We will continue to leverage the vast amounts of expertise that project participants have in all aspects of scholarship. Project participants will also be able to leverage collaborators from their respective campuses, mainly from areas of public health and/or healthcare administration. Consistent with recommendations in Burton et al. (2021), we will also seek to establish relationships with external partners and others to share expertise and leverage limited resources.

Advantages of Doing This Work as a Multistate Effort

This team has 15 years of successful collaboration bringing different skills and expertise to the project. Project participants have identified strengths of team members which serves to focus our efforts. Over time, participants have joined the project contributing fresh perspectives and added skills. The anticipated project team includes participants from 1862 and 1890 land-grant universities and other public and private universities. Participants are from all regions of the country. They bring diverse expertise related to the three land-grant missions of teaching, research, and extension.

Likely Impacts

This project is expected to result in a greater understanding of how families make financial and health decisions under economic uncertainties. The results will provide a foundation for developing, implementing, and evaluating educational initiatives to increase financial capability, positively impact health related decisions, and inform policy making to improve household well-being.

As demonstrated in previous work, this group has a strong reputation among those in the field of family and consumer economics as a leader in innovative research methods. Participants expect to continue to explore, use, and share our discoveries of innovative and cost-effective ways to collect data.

Related, Current, and Previous Work

This project builds on the work of the committee's previous projects that focused on the complex nature of saving (2008 - 2013), financial decision-making and information management across the lifespan (2013 - 2018), and the intersection of healthcare and financial decision-making across the lifespan (2018 - 2023). A unifying theme running through this work has been the application of a behavioral economics framework. Another theme has been the tradeoffs households face as they manage all of the resources available to them.

Complex nature of saving. The committee's activities related to the complex nature of savings yielded several important insights that the proposed project will build upon. Specifically, the number of discussions about personal finance parents have with their offspring while growing up increases the likelihood of respondents planning their spending and having written goals, economic factors impacting the likelihood of having a saving account included age and using selected financial practices, and practicing recommended financial management behaviors and a low level of anxiety are likely to encourage saving regularly (2012 NC1172 Annual Report, https://www.nimss.org/seas/34161). Further, in a sample of low and moderate income households, financial management behaviors (making spending plans, having written goals, and monitoring spending) were positively related to saving regularly; those who used more sources of information were more likely than other similar households to have a savings account and also to have an investment account; and if households had more perceived barriers (such as access to

financial services), they were less likely to have a savings account (2013 NC1172 Annual Report, https://www.nimss.org/seas/39541).

<u>Financial decision-making and information management across the lifespan.</u> Concluding their review of literature focused on external and internal factors influencing homeownership decisions for millennials, Xu et al. (2015) suggested that future scholarship examine how millennials are prioritizing homeownership, retirement savings, and other important financial resource management decisions, given constrained resources. With its emphasis on family and consumer financial and health decisions under economic uncertainty and the tradeoffs between human capital and financial capital households must manage, the proposed project builds on this previous work and responds to this recommendation.

<u>Intersection of healthcare and financial decision-making across the lifespan.</u> The proposed project flows directly from recent and on-going work of the NC2172 2018 – 2023 project and its members. Selected examples of related and on-going work are highlighted below.

Household financial wellbeing: Xu and Yao (2022a) projected household financial vulnerability in the COVID-19 pandemic. Using a nationally representative sample of households from the 2017 Panel Study of Income Dynamics (PSID), they analyzed potential changes in financial status in the pandemic resulting from loss of income and savings from discretionary consumption. Their study showed that a substantial part of the universal stimulus payments was made to households that had sufficient income to cover basic needs and those saved by reducing discretionary expenses. For the most financially vulnerable, the first one-time stimulus payment was too little and too late to help with their financial difficulties. Their findings shed light on to whom and in what form the US government should direct financial assistance during the pandemic.

Household financial decision-making: Xu and Yao (2022b) introduced collective rationality and comparative advantage into understanding household financial decision-making responsibility allocation and its relationship to wealth accumulation. Evidence from the Health and Retirement Study (HRS) shows that conscientiousness, memory, and numeracy are favorable personal attributes for household financial decision-making. Greater relative advantages in these attributes predict a higher probability of assuming financial responsibility. Households that assign the relatively less advantaged spouse as the financial decision-maker tend to have a lower total net worth and a lower financial net worth. Their results suggest that it is critical for financial planning professionals to engage both spouses in the initial discussion of household finances and to assess the efficiency of the status quo financial decision-making responsibility allocation.

Household financial stress and health: While the link between financial strain and negative health outcomes is well established, the mechanisms behind the relationship are understudied. Currently, work in progress by Heo, et al. (2022) explores the link between COVID-19 induced stressors and health outcomes using the ABC-X stress model. This study employs a data set from an online survey collected as part of the NC2172 project during the pandemic, May-June of 2021. Stressors are measured as income change and experiencing of food difficulties. Health outcomes are operationalized with self-rated physical and mental health. Perceived financial stress was introduced as a coping mechanism that connects the stressors and health outcomes.

Income changes, perception of the financial situation, and financial stress level were associated with physical health. Perceived financial situation and financial stress were associated with mental health. Among those with health insurance, the role of financial stress on mental and physical health was sustained.

Behavioral Economics and Decision-Making: Using an online survey from the previous iteration of this project, Porto et al. (2021) examined in an experimental design the associations between past college and student loan experiences and financial decision-making. Results indicated the more that an individual borrowed personally, the more that he or she is likely to think a higher amount being borrowed by a hypothetical high-school graduate is prudent. This finding is supported by the concept of anchoring where survey respondents based their choices on their previous overall college experience even when different scenarios were presented.

Medicaid Expansion: Mandal (2022) analyzed the impact of Medicaid expansion on rural-urban disparities in access to health insurance, financial access to primary care providers, use of preventive care, and use of emergency department for medical reasons that did not lead to hospitalization among low-income individuals. Low-income rural residents were found to have greater reduction in likelihood of uninsurance than their urban counterparts. While an increase in the likelihood of routine check-ups was found to be significant among only rural residents, a decrease in the likelihood of repeated visits to the emergency departments for nonurgent reasons was only significant among the urban population. The study highlighted the importance of understanding rural experiences to reduce rural—urban health disparities.

Health Insurance and COVID-19: Using data from the U.S. Census Bureau's Household Pulse Survey, Mandal et al. (in press) analyzed the likelihood of loss of health insurance and enrollment into new health coverage during the early months of the COVID-19 pandemic. Loss of employment was associated with a significant increase in the likelihood of loss of health insurance and, specifically, an increase in the likelihood of loss of employer-sponsored health insurance. However, individuals in Medicaid expansion states experienced a lower likelihood of loss of health insurance compared to individuals in non-expansion states. There was a substantial increase in Medicaid enrollment in expansion states. Re-employment or acquiring employment was associated with a gain in health insurance coverage. During an economic downturn, eligibility and coverage gaps leave many without affordable coverage options, and the pandemic will likely bring renewed attention to gaps in Medicaid coverage in non-expansion states.

Financial impact of COVID-19 on vulnerable families: Several members of NC2172 have participated in a study about "the financial impact of COVID-19 on the health and well-being of low to moderate-income families and Black, Indigenous, and people of color." The study was funded by Wells Fargo in 2021 to principle investigator, Dr. Jinhee Kim at the University of Maryland, College Park. A survey was developed and made available online between mid-November and mid-December, 2021. There were 3,570 responses. A poster with preliminary results was presented at the annual conference of the American Council on Consumer Interests (Kim, et al., 2022) and additional presentations and papers are in process.

Because existing data sets typically do not capture the types of variables necessary to address the committee's goals, a strength of the committee has been the ability to pool resources collaboratively to develop survey instruments and collect data. During the period of the current project, several unique data sets were assembled and analyzed with results being disseminated at academic conferences and through peer reviewed publications (Xu et al., in press; Bennetts & Kiss, 2022; Griesdorn & DeVaney, 2022).

Focusing on how consumers weighed pandemic situational factors versus household production considerations of timesaving and cost, Xu et al. (in press) collected a nationally representative sample to examine how consumers with different health and socio-demographic profiles consider these factors for online grocery shopping choices and how their choices changed in the first seven months of the pandemic. They found that consumers with moderate-to-high income, white, having insurance, and not in the labor force value the timesaving and convenience of online grocery shopping more than pandemic situational factors. Lung disease, diabetes, mental health conditions, age, income, and college degree explain the dynamics of online grocery shopping choice as the pandemic evolved. Implications for the development of technology-assisted adaptation to future public health emergencies emerged. In their exploratory study, Bennetts and Kiss (2022) compared savers and non-savers who reported being financially impacted by COVID-19. In addition, they explored the actions of "usual savers" and if they utilized the economic stimulus payments as an opportunity to change their savings behavior or not. Griesdorn and DeVaney (2022) studied the health and wealth connection to financial well-being during COVID-19. They proposed that financial well-being is a function of physical health, psychology, sociology, and spirituality. Using a sample of 3,200 adults collected online in the U.S. during November and December 2021, the results showed that the proxy measures for health and psychological variables were significantly coordinated with financial well-being. Additional study is underway. More can be done with all of this data and it is available to be used to address the objectives of the proposed project.

Related Multistate Research Projects

The following multistate research projects were found to be related, though not duplicative of the proposed project, and could be potential collaborators based on their stated objectives. The common themes are individual, family, and community factors impacting decision making and resilience.

NC1171: Individual, family, and community factors associated with resilience in diverse, rural, low-income families

Objectives:

- 1. Community Capacity: To assess community capacity to support resilience in diverse rural low-income families.
- 2. Individual and family resilience processes: To examine individual and family resilience processes from the perspective of rural, low-income mothers.

NC1100: A systems perspective to community resilience: Rural healthcare at the intersection of households and businesses Objectives:

- 1. Identify the strategies used by small rural businesses to maintain and develop a skilled and healthy labor force.
- 2. Assess the effect of workforce wellness programs on firm outcomes such as employee retention and profitability.
- 3. Assess the impact of health disparities on the wellbeing of households and business owning households in rural communities.
- 4. Exploring the role of rural small businesses in community-based efforts to address substance use disorder.

W5001: Rural Population Change and Adaptation in the Context of Health, Economic, and Environmental Shocks and Stressors

Objectives:

- 1. Describe recent U.S. rural population change and the components of these changes, and investigate the roles of recent population health, environmental, and policy shocks and stressors in driving these changes.
- 2. Describe shifts in rural economic wellbeing (i.e., poverty, livelihood strategies, income, housing, infrastructure) in the context of recent population health, environmental, and policy shocks and stressors and identify linkages between economic wellbeing and population dynamics, policies, and institutional responses.
- 3. Investigate how recent shocks and stressors affect trends in rural population health, disabilities, and health disparities across the lifespan and how communities and institutions respond to and adapt to these challenges.

Building upon what we have learned, and continuing to apply the framework of behavioral economics, this new research fills an important gap in understanding the impact of economic uncertainties on financial and health decision-making processes and outcomes.

Objectives

- Understanding family and consumer financial and health decisions under economic uncertainties.
- Identifying personal or household characteristics and other contextual factors contributing to household financial and/or health decisions and well-being.
- Assessing the role of financial capability, healthcare access, and inequalities on household decision-making and well-being.
- Applying the framework of behavioral economics to inform policy making to improve household well-being.

Methods

As in past projects, the committee will employ a mixed methods approach to address the proposed objectives.

- 1. Understanding family and consumer financial and health decisions under economic uncertainties.
- 2. Identifying personal or household characteristics and other contextual factors contributing to household financial and/or health decisions and well-being.

- 3. Assessing the role of financial capability, healthcare access, and inequalities on household decision-making and well-being.
- 4. Applying the framework of behavioral economics to inform policy making to improve household well-being.

Activities will begin with the committee's 2023 annual meeting, typically held in late spring or early summer. A systematic review of the literature will be conducted and data analysis will include both descriptive statistics and multivariate techniques.

To support activities related to Objectives 1 and 2, relevant and recent scholarship will be reviewed and compiled. Data collected during the current project (NC2172 Behavioral economics and the intersection of healthcare and financial decision making across the lifespan) can be used to explore relationships between personal and household characteristics, contextual factors, and household decisions and well-being. In this way, the proposed project further utilizes existing resources developed collaboratively as outputs of NC2172. These datasets include: 1) the RAND American Life Panel Well Being 561 - Omnibus Survey [2300 wave 7], 2) the RAND American Life Panel Well Being 581 - Omnibus Survey [W10 2000 Oct 2021], 3) NC2172 Understanding Household Financial and Health Decision-Making during the COVID-19 Pandemic data, and 4) data collected with funding from Wells Fargo focused on the financial impact of COVID-19 on vulnerable families,

The RAND American Life Panel. This is a nationally representative, probability-based panel of more than 6,000 participants who are regularly interviewed over the internet. The Omnibus surveys focus on a variety of topics and questions. The focus of the NC2172 questions in both surveys related to online grocery shopping behavior within a household production framework in the context of technological development and the public health crisis of the pandemic. Using unique ALP survey identifiers, data can be matched to information on respondents' health, abilities, disability, functional capacity, and movement.

<u>Understanding Household Financial and Health Decision-Making during the COVID-19</u>

<u>Pandemic.</u> As a part of this multi-state research team, NC 2172: Behavioral economics and the intersection of healthcare and financial decision making across the lifespan, an online survey data was collected during the Pandemic in mid-2021. IRB approval was sought by North Dakota State University. The target sample size was 2,000 adults, representing US population. Because the research question was to examine the impact of COVID-19, the initial screening question asking "In the past 12 months, was your financial situation negatively impacted by COVID-19" was included. The Qualtrics data were collected from 1,000 who answered the question positively and 1,000 who answered negatively. A range of household financial and healthcare decision questions were included in the instrument. Specifically, questions regarding financial situation, financial literacy, financial stress, food insecurity, and foregone healthcare were asked. COVID-19 related questions include the change of employment status, change of income, stimulus check payment, expenditure of stimulus check, and changes in financial planning behaviors since the onset of COVID-19.

Wells Fargo data on Financial Impact of COVID-19 on Vulnerable Families. With its focus on low to moderate income families and Black, Indigenous, and people of color, this data set offers

a unique opportunity to study connections between health and wealth including the concepts of optimism, financial trust, resilience and life satisfaction.

An example of ongoing work related to Objective 1 is a current study conducted by Heo, et al. (2022) use the NC2172 Understanding Financial and Health Decisions data employing multivariate analytic methods (i.e., hierarchical linear modeling and seemingly unrelated estimation). By employing the data and the methodologies, the mediation effects by perception of financial situation and the financial stress are expected to be found on the association between income shock and the health perception (mental health and physical health). In addition, the ownership of health insurance is expected to affect the mediation effect of perception of financial situation and the financial stress on the association between income shock and the health perception. This study may also expand to the fourth objective. If results indicate financial stress and the perception of the financial situation affect the association between income shock and health perception, these behavioral findings may reveal potential policy recommendations to improve household well-being.

Examples of ongoing work related to Objectives 2 and 3 are current studies conducted by Saboe-Wounded Head, DeVaney and co-authors using the Wells Fargo data to: 1) investigate how American Indians and Alaska Natives managed financially during COVID-19, and 2) analyze the financial fear of loss from past experiences, misunderstanding, and lack of trust in banks

The mixed methods approach for investigating our proposed objectives will include qualitative and quantitative methods of data collection. Focus groups, online surveys, experiments, and smaller local convenience samples aimed to explore the decision making by individuals dealing with economic uncertainty will be employed.

Focus groups will be conducted in various locations across the US utilizing team member Extension contacts and networks. At each focus group, an experienced facilitator with lead the session which will be audio recorded. A written transcription of each focus group session will be produced. Selected researchers will conduct qualitative analysis on the transcriptions of the audio recordings of the sessions using best practices suggested by DeVaney et al. (2018) and Lee (2014). Excel will be used for coding the data. Potential themes will be identified and coded. Each researcher will analyze the data separately and identify themes. They will then compare their analyses and agreed on themes establishing inter-rater reliability. Collecting the information from different focus groups of varying sizes, held at different times of day, in different locations, and with participants with varying demographics will ensure trustworthiness and triangulation of the data. To achieve validity, participants will be asked to read the analyses and provide feedback on the researchers' interpretations.

As described in the Milestones section, the design of experiments and other qualitative and quantitative methods of data collection will begin in 2024 with at least one survey being fielded in 2025. Planning for these activities will occur during the group's monthly meetings and at the annual meetings in 2023 and 2024.

Any online surveys will be contracted through an independent data collection agency that will sample, collect, and clean the data for the project. An outside data collection agency is preferred

to ensure that the instrument is administered uniformly and to increase efficiency in administration and data collection. Qualtrics will be used to create any online surveys and sample sizes will be large enough to produce the required power for our selected level of significance.

The data collection agency can randomly assign participants to different versions of the survey if needed for experiments where the survey is identical for all participants except for the treatment. This treatment could include the introduction of information to the participant, or a difference in choice architecture.

Measurement of Progress and Results

Outputs

- Analyzed multi-method quantitative and qualitative results, manuscripts, and outreach publications.
- Recommendations for developing educational programs or materials to assist consumers in information management and improving the outcomes in decision-making regarding health care decisions and household well-being.
- Recommendations for policies related to health care and household well-being supported by behavioral economic theory.

Outcomes or Projected Impacts

- Identify the personal or household characteristics that lead to optimal or sub-optimal financial decisions.
- Understand the role of economic uncertainty and other contextual factors in the consumer decision making process regarding health and well-being.
- Assessment of the role that financial capability, healthcare access, and other inequalities have on household decision-making and well-being.
- Improve educational initiatives that will be expected to increase financial capability and financial decision-making regarding health care decisions and household well-being.
- Inform policy related to holistic household well-being initiatives.

Milestones/Timeline

Objectives 1 and 2 (2023): Begin to summarize relevant and recent literature related to consumer well-being and identify relevant existing data sets. Begin to organize a symposium to be held in 2024 to determine gaps in the literature on consumer health and well-being and related areas. Identify potential research questions for consumer health and well-being research.

Objectives 1, 2, 3, and 4 (2024): Objectives Hold symposium. Partner with Cooperative Extension to conduct focus group interviews within participating states to discover and understand concerns surrounding consumer health and well-being. Design experiments and other qualitative and quantitative methods of data collection related to consumer health and well-being. Draft survey questions and review existing datasets for data to address research questions

pertaining to the topic. Submit at least one literature review manuscript to a peer-reviewed journal. Submit at least two manuscripts to peer reviewed journals.

Objectives 3 and 4 (2025): Field at least one consumer health and well-being experimental/survey study. Write/publish manuscripts and outreach publications. Submit proposals for presentations at national academic conferences. Submit at least four manuscripts for publication in peer-reviewed journals and submit at least six manuscripts for academic conferences.

Objectives 1, 2, 3, and 4 (2026): Identify potential funding opportunities to further the research of consumer health and well-being and potential policy initiatives to support household financial decision making. Apply for funding with at least one grant provider.

Objectives 1, 2, 3, and 4 (2027): Write/revise manuscripts for peer-reviewed journals. Prepare outreach publications to disseminate information to land-grant universities and the extension system that highlights the main findings from the project's outputs. Write final report for NC-2172 5-year project study. Determine an area of emphasis that would support a submission of an application for the next project for consideration to USDA/NIFA.

Projected Participation

This section is generated automatically as the SAESs enter participants

Outreach Plan

The results of the project will be made available through articles in appropriate journal and conference proceedings and through refereed and invited presentations at local, state, regional, and national conferences. Along with the answers to the research questions, papers will focus on an explanation of conceptual models developed, recommendations for educational curricula, and recommendations for future research. Because several team members hold Cooperative Extension appointments in their respective states, in-service workshops and related lay publications will be developed and/or modified. This multi-faceted strategy will allow for wide dissemination of research results and subsequent knowledge to diverse audiences across the country.

Organization/Governance

The Project Committee follows a standard leadership structure and consensual decision-making process. The chair convenes the monthly conference call meetings and the annual meeting. S/he is the primary contact for the administrative liaison and NIFA representative. The secretary records the minutes of the conference call meetings and submits reports required by AES. Cochairs of the research sub-committee provide primary leadership and oversight to the research process (e.g. instrument development and liaison with the data collection agency and serve as coprincipal investigators for any grant funding at their respective institutions). Various members assume leadership for specific tasks such as developing report drafts, meeting with funders, assembling data from members of the team, etc. A set of guidelines for data access, writing, and co-authorship is has previously been developed. It is reviewed and updated regularly.

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